A CROSS-SECTIONAL STUDY ON THE PREVALENCE OF COMMON SKIN DISEASES AMONG PRIMARY SCHOOL CHILDREN IN GOVERNMENT SCHOOLS OF PULIANTHOPE ZONE, CHENNAI, 2011.

Dissertation submitted to

THE TAMILNADU DR. MGR MEDICAL UNIVERSITY

In partial fulfillment of the requirements for the degree of

M.D. BRANCH XV

COMMUNITY MEDICINE

THE TAMIL NADU Dr. MGR MEDICAL UNIVERSITY,

CHENNAI, TAMILNADU.

APRIL - 2012

CERTIFICATE

This is to certify that the dissertation titled **"A CROSS-SECTIONAL STUDY ON THE PREVALENCE OF COMMON SKIN DISEASES AMONG PRIMARY SCHOOL CHILDREN IN GOVERNMENT SCHOOLS OF PULIANTHOPE ZONE, CHENNAI, 2011"** is a bonafide work carried out by **Dr. M. JANAKI**, Post Graduate student in the Institute of Community Medicine, Madras Medical College, under my supervision and guidance towards partial fulfillment of the requirements for the degree of M.D.Branch XV Community Medicine and is being submitted to The Tamilnadu Dr.M.G.R. Medical University, Chennai.

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ACKNOWLEDGEMENT

I gratefully acknowledge and sincerely thank **Dr.V.Kanagasabai, M.D.,** Dean, Madras Medical College, Chennai for granting me permission to carry out the study.

I have no words to express my gratitude to **Dr.A.K.Rajendran, M.D., D.P.H.,** Director, Institute of Community Medicine, Madras Medical College,who has been a constant encouragement and perseverance ,which has helped me in the successful completion of this study.

I am deeply indebted to **Dr. V.V.Anantharaman, B.Sc., M.D., DPH., Dip.Dermatology.,** Assistant Professor, Institute of Community Medicine, Madras Medical College who has been the guiding force behind my study and helped me by extending his knowledge and experience during the course of this study.

I extend my sincere gratitude to **Dr. A. Chitra, M.D.,** Assistant Professor, **Dr.S. Soundammal D.P.H.** Tutor, Institute of Community Medicine, Madras Medical College for their invaluable suggestions and encouragement.

My Acknowledgement is due to **Dr. Vijaya Baskar, M.D. D.C.H.,** Assistant Professor Dept.of Dermatology and Leprosy/Pediatric Dermatology OPD, Institute of Child health, Madras Medical College, Chennai for the timely help rendered by him during the initial phases of the study.

I extend my sincere gratitude to **Dr.B.W.C.Sathiyasekaran, M.D.,** HOD, **Dr.G.Palani, M.D.,** professor, Department of Community Medicine Sri Ramachandra

Medical College and Research Institute Porur, Chennai for their invaluable suggestions and encouragement.

My sincere thanks to **Mr.P.Venkatesh I.A.S**, Joint commissioner, Education. Corporation of Chennai for permitting me to conduct the study in the schools.

I am grateful to **Dr.Guganantham** City Health Officer Chennai, Assistant Educational Officer Zone 3 and Headmasters/Headmistress of the schools for their support to complete this study.

I wish to thank all the faculty and friends for their continuous encouragement and moral support during the study peroid.

I am also grateful to the school teachers who helped me a lot while conducting the study.

I would also like to thank my parents for their moral support throughout the study period.

Above all My heartfelt thanks to the Children and their parents ,family members who have been enthusiastically participated in the study.

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ABBREVIATION LIST

C.P.S	-	Chennai Primary School
Df	-	Degree of freedom
HPV	-	Human Papilloma Virus
IBR	-	Insect Bite Reactions
ICH	-	Institute of Child Health
OPD	-	Out Patient Department
P.Versicolor	-	Pityriasis Versicolor
SPSS	-	Statistical Package for Social Science
T.Pedis	-	Tinea pedis
WHO	-	World Health Organization

INTRODUCTION

1. INTRODUCTION

Skin is the largest body organ providing protective covering to the underlying structures. It is thin and more delicate in children. Skin diseases are common health problem among school going children [(1)]. The prevalence of skin diseases among children in various parts of India range from 8.7% to 35% in school based surveys [(3).] Skin manifestations may occur due to underlying primary skin diseases or they may represent manifestations of a systemic disorder. Early diagnosis and prompt treatment of skin diseases can decrease the childhood morbidity and their complication.

Skin diseases here refers to disorders of exclusively (or predominantly) the superficial layers of the skin. Common disorders refer to diseases that occur frequently in the general population (with a prevalence of $\geq$ 1%) or at a primary or peripheral healthcare level, since disorders that are uncommon in some areas may be common in others [(2)].

The common diseases are Pyoderma, the generic term used to describe any variant of superficial bacterial skin infection (e.g. impetigo, impetigo contagiosa, folliculitis, “furuncle, carbuncle, tropical ulcer, scabies, and other common ectoparasitoses (Pediculosis capitis, P.corporis, etc.), Tinea capitis and other superficial mycoses (dermatophytosis, candidiasis, pityriasis versicolor, etc.); benign viral tumours (verrucae, molluscum contagiosum, etc.), dermatitis – irritative, allergic, or atopic. [(2)]

The main etiological factors whose role is probably significant in developing countries are a hot and humid climate, low hygiene and poor access to water, high interpersonal contact and household overcrowding, and certain other skin conditions like reactions to insect's bites[1]. There is a wide variation in the Pattern of skin diseases reported from different parts of the world, even in the same country.

In India, characteristically a hot and humid region in most of the parts and most of the year, sanitation is poor, poverty is rampant and population is huge, malnutrition is common, personal hygiene is scanty, literacy level is rather low, public consciousness for cleanliness is very substandard. It is therefore not unlikely the majority of the population suffers from one or more skin diseases.

With little or no medical facility, more than 75% of the population live in the villages or in the overcrowded and unhygienic urban slums, coupled with poverty, the religious superstitions and taboos worsen the problems.

Skin diseases are very common among children in developing countries. They have not been regarded as a significant problem that could benefit from public health measures. More attention is frequently given to less common health problems .This attitude is due to the assumption that skin diseases are a benign, not life-threatening, minor nuisance, etc[2].School survey is a useful parameter to screen large number of children of particular age group for presence of diseases. The aim of the study was to find out the prevalence of common skin diseases and the factors associated with the skin diseases among the Primary school children in Government schools in a Zone of Chennai City.

OBJECTIVES

2. OBJECTIVES

1. To find the Prevalence of Common Skin diseases among the Primary School Children in Government Schools of Pulianthope Zone, Chennai 2011.

2. To identify and assess the various factors associated with Skin diseases in the above population.

JUSTIFICATION

3. JUSTIFICATION

1. Children are vulnerable to many Skin diseases.

2. Transmissible skin diseases are of Public health importance.

3. Early diagnosis and prompt treatment of skin diseases can decrease the childhood morbidity and their complication. E.g: Prevention of Acute Glomerulo Nephritis by early diagnosis and prompt treatment of Impetigo, Scabies.

4. Chronic skin diseases may lead to psychological problems in children.

5. Improvement of Personal hygiene not only reduces the Skin diseases but also reduces many health problems.

6. It is important in Community health to assess not only the prevalence but also the various factors associated with skin diseases.

7. The prevalence of skin diseases varies worldwide. Information regarding local prevalence and its various causes may help for development of policies towards better control.

REVIEW OF LITERATURE

4. REVIEW OF LITERATURE

4.1 Epidemiology of skin diseases

Data on burden of skin diseases are scanty. Even if available, they are of limited use in describing the burden of skin diseases in community as most published data are hospital based.

Table 1: Studies on Prevalence of Skin diseases among Children (World)

Researcher	Country	Year	Sample Size	Prevalence	Common Condition
Dr. Sulafa Abdullah et al (15)	Khartoum North	2007	584	32%	Eczema 35.3%
Ewaldo V Komba et al(16)	Dar es Salaam	2010	420	57.3%	Infectious dermatitis 30.4%
wu YH et al(22)	Taiwan	1998	3029	-	P.capitis (12.9%)
K.A. Khalifa et al (26)	Iraq	2004	2160	40.9%	Non Transmissible Skin diseases
Amin TT et al (33)	Al Hassa, Saudi Arabia	2010	1337	27.2%	Superficial infections
Zimmo et al(37)	Jeddah, audi arabia	1996	2,788	19.2%	Nevi(12.8%),head lice(11.1%)
Emodi IJ et al(46)	Nigeria	1996-2005	16,337	1.3%	Pyoderma
Wafa Y. Al-Saeed et al (47)	Eastern Saudi Arabia	2003	2239	98.6%	Pigmentary (91%),dermatitis (27%)

Table 2: Studies on prevalence of skin diseases among children in India

Researcher	Place	Year	Sample	Prevalence	Common Condition
Kaliaperumal et al [5]	Pondicherry, India	2001-2002	2100	54.4%	Pyoderma
Dr. Libu G.K et al [8]	Kerala, India	2006	919	70.5%	Pediculosis capitis
Dogra S et al[18]	Chandigarh, India	2003	12,586	38%	Skin infections
S Gatha rao et al[29]	Mangalore India	1999	1161	76.65%	Nevoid conditions
RA Valia et al [34]	Varanasi, India	1986-1987	12481	53.6%	Pediculosis capitis
K.S Negi et al[36]	Uttarpradesh, India	2001	1754	Infectious dermatoses 50.9%	Pediculosis capitis

4.2 Epidemiology of individual Skin diseases [1] [9] [20] [21]

4.2.1 Scabies

Scabies is an intensely itchy condition caused by the mite (Sarcoptes scabiei). The itching is worse at night. The onset of symptoms occurs 3-4 weeks after the infestation is acquired. The infestation can occur at all ages but particularly occurs in children. It is a common public health problem in poor communities and developing countries [4].

The most common presenting lesions are papules, vesicles, pustules, and nodules. The characteristic lesion of scabies is burrows which appear as slightly raised, brownish tortuous lesions. They occur commonly on the wrists, borders of the hands, the sides of the fingers, the finger web spaces, and the feet.

The most important complication of scabies is secondary bacterial infection usually caused by Group A streptococci. Secondary changes like Eczematous changes are common and may be widespread and severe. Secondary infection manifesting as folliculitis or impetigo may also be severe and extensive.

- Prevalence of scabies among children aged 6 to 15 years was 8.2% in a study done by SB Rotti et al [(6)]. This prevalence was higher among boys than girls and higher among Muslims than Hindus.

- Studies among the indigenous population of northern Australia indicates that this infection is not always benign and the persistent proteinuria associated with post scabies infestation may cause long-lasting renal damage [(7).]

Treatment

Permethrin (5%) cream is the treatment of choice in infants and children. It is safe even in infants as young as 2 months of age. It has to be applied from neck to toes in adults and young children and from head to toes including palms and soles in infants. It should be left undisturbed for 6-8 hours in infants and 12-14 hours in children. If necessary, it may be repeated after two weeks.

Gamma bezene hexachloride (1%) is the most widely used antiscabetic because of its efficacy and affordability than permethrin but it is not recommended in infants and small children. Also, it cannot be applied over the face and head and

second application is a must after a week. The current breakthrough in the treatment of scabies is oral Ivermectin. It is considered to be safe in children above 2 years of age. Two doses of 200 g/kg body weight at one week interval has been recommended[1]

4.2.2 Pediculosis Capitis

Pediculosis capitis is a scalp infestation by the human head louse (Pediculus humanus capitis). It is a highly contagious and serious problem among children. Transmission is by personal contact, common use of combs, sharing of cots, beds and pillows. Pediculosis is undoubtedly common in people with poor personal hygiene and also common even among the so called sophisticated rich family. It occurs as a result of crowding and unhygienic conditions. A diagnosis of active infestation is confirmed by the existence of live lice. The presence of eggs alone (without live lice) may reflect previous or treated infestation.

Application of 1% gamma benzene hexachloride to the affected area is the treatment of choice. This medicine should be used once in 2 days and has to be repeated after 10 days to destroy nits that may survive to become adult. If necessary, all possible sources should be examined and treated.

Prevention

Personal cleanliness and the treatment of the source of infection is the mainstay of management. Daily bath with soaps and no sharing of combs, clothes, beds, pillows, etc., constitute useful preventive measures. Cots, beddings, pillows, should be put in the sunlight at least once a week as the sunrays acts as a good disinfectant.

- Libu G.K et al [8] in Kerala found that Pediculosis capitis was the commonest transmissible skin disease with a prevalence of 52.6% among primary school children .Their gender based analysis revealed high prevalence among girls.

- A study done by Vikas Bhatia et al [10] in Chandigarh in the age-group of 0-14 years revealed that Pediculosis capitis was the leading presentation among 136 children (20.4%) out of 346 and four times more in the girls.

- In a study done by Kamiabi et al[11], the highest rate of infestation was seen in 9-year-old students and significant relationship was observed between the rate of infestation and parent's education, socioeconomic and sanitary conditions.

4.2.3 Pyoderma

Pyoderma is Common purulent infection of the skin caused by staphylococcal or streptococcal organisms. Primary pyoderma: Direct infection of the skin and adjacent tissues. Secondary pyoderma: Secondary to pre existing dermatoses like scabies, Pediculosis, eczema.

4.2.3.1 Impetigo

It is a common skin disease in our country, especially among the children during summer. Impetigo is a superficial bacterial skin infection primarily caused by staphylococcus aureus and sometimes by Streptococcus pyogens. Face and limbs are commonly affected. In most cases, the lesion starts on the face and eventually spread to other parts of the body. A good diagnostic sign is the pustules having lower half filled with dense pus. Honey-colored crusting is important.

4.2.3.2 Impetigo Contagiosa

It is characterized by thick honey colored crust covering superficial erosions following rupture of thin walled superficial vesicles or pustules. These lesions heal without any residue. In severe cases, there may be regional lymphadenitis with fever and other constitutional symptoms. Occasional sequelae of impetigo contagiosa is acute glomerulo-nephritis and usually this nephritis has long term favorable prognosis.

Treatment

Impetigo heals without scarring, but temporary pigmentary change can occur. Mild cases are treated with antibiotic ointments like mupirocin or fusidic acid [(14)] after cleansing with soap and water [(14)]. More extensive cases are treated with appropriate oral antibiotics like Cloxacillin 250 mg qid, Flucloxacillin 250 mg qid.

Prevention

Good hygiene practices prevent impetigo from spreading. All the members of the household should wash their hands thoroughly with soap on a regular basis. Contact with infected person and his or her belongings should be avoided. Infected persons should use separate towels for bathing.

- Patel JK, et al [(13)] found that the most common Skin diseases among the children were of infectious etiology (38.43%) in which impetigo (11.13%) was the leading condition. They said that high frequency of infections and infestations and many of skin diseases can be controlled by proper environmental sanitation, creating awareness among parents and children and preventing overcrowding.

- Maximum prevalence of scabies and impetigo was seen in the age group of 5 -8 years in a study conducted by Andrew C et al [(31)].

4.2.4 Miliaria

Miliaria occurs when the flow of eccrine sweat is impeded by obstruction of the intraepidermal portion of the sweat duct .Miliaria rubra occurs when the sweat duct obstruction is deeper in the epidermis.Miliaria rubra comprises of erythematous papules and papulo vescicles, about 1-4 mm in diameter on a background of macular erythema. Staphylococcal secondary infection of miliaria may lead to sweat gland abscess. The symmetrical crops of miliaria rubra occurs most often in flexural areas especially around the neck, groins and the auxilla. The face, scalp and upper trunk are frequently affected. These lesions subside in 2-3 days but recurrences are common.

Treatment

Avoidance of excessive heat and humidly is the most important aspect of management. Cool baths, light clothing are helpful. Topical application of ordinary spirit (or after shave/ deodorant/ body spray) gives local cooling effect and drying up of miliaria lesions. Calamine lotion also helps in most of the cases. If itching is excessive, oral Promethazine or Chlorpheniramine syrup may be given for 7-10 days.

- Sardhana et al [(12)] study on the spectrum of skin diseases among Indian children in 2009 showed infections and infestations as the most common skin diseases and the prevalence of miliaria as 5%.

4.2.5 Eczema

Eczema is a form of dermatitis or inflammation of the epidermis. The term eczema is broadly applied to a range of resistant skin conditions characterized by one or more of these symptoms like redness, skin edema, itching, dryness, blistering, oozing, or bleeding. Areas of temporary skin discoloration occur due to healed lesions.

An abnormal function of the immune system is seen in most of the cases where the body reacts abnormally to external impressions which otherwise don't have an impact on healthy individuals. some of the triggers are house dust, sand, smoke, milk and milk products, fish, egg, peanuts, soaps, detergents, change in the temperature, humidity etc. Commonly affected areas are knees, elbows, ankles, (especially inner side), Face and neck, arms and legs, folds of skin.

Some of the complications of eczema are Lichenification (leathery skin), hyper pigmented eye lids, recurrent skin infections etc.

Treatment

The application of moisturizer on a regular basis can be very helpful. Avoidance of triggers, and sudden temperature changes, mild soaps and cotton clothes are the treatment modalities.

- Sulafa Abdullah et al [(15)] reported eczema as the common skin disease among Primary school children in Khartoum North in 2007.

4.2.6 Dermatophytosis (Superficial Fungal infections)

Three species of dermatophytosis are:

1. Tricophyton (affect skin, hair, nails)
2. Microsporum (affect skin and hair)
3. Epidermophyton (affect skin and nails)

Depending upon the site of the involvement:

Scalp- Tinea capitis

Face-Tinea faciei

Feet-Tinea pedis

Body-Tinea corporis

Nails-Tinea unguium

Groin and buttocks:Tinea cruris

4.2.6.1 Tinea corporis

Tinea corporis is ringworm of the body.Numerous dermatophyte fungae can cause this infection but Trichophyton rubrum predominates.Annular, itchy, erythematous, scaly patches with central clearing are typical. Single lesion ,multiple plaques or versicles may dominate. Central resolution is common but not complete and the central skin may show postinflammatory pigmentation.

Treatment

Tinea corporis responds well to antifungal creams like Terbinafine, or one of the Imidazoles like Ketoconazole, Econazole or Clotrimazole .These should be applied twice daily until resolution, and then for a period of 2 weeks.

4.2.6.2 Tinea faciei

Tinea faciei is the infection of the glabrous skin of the face with the complaints of itching; burning and exacerbation after sun exposure. Lesions are flat patches of erythema. Sometimes annular lesions indurate with raised margins may be seen.

4.2.6.3 Tinea Capitis

Most commonly occurs in children caused by Microsporum Canis. (M.canis) Lesions are pink, scaling patches on the scalp skin and areas of hair loss due to

breakage of hair shafts. It is easily spread by sharing hair combs. Round areas of scaling and hair loss are scattered over the scalp .Pustules and nodules occur particularly with M.canis and do not signify secondary bacterial infection.

Treatment

Griseofulvin 15 - 20 mg/kg/day in 2 divided doses for 3 months. In very mild cases, Imidazole shampoos like Ketoconazole are probably effective. Tinea capitis becomes much less prevalent in older children and teenagers because the oily scalp acts as a barrier.

- Tinea capitis was commonly seen in the age group of 8 – 10 years belonging to lower socio economic group as reported by chander et al [(40)] .Sharing of hair combs and hair accessories was seen in their study population.

- Tinea capitis was most commonly seen in children between 6 – 10 years age group in their study by Majid Zarrin et al [(17)] in Iran.

- Dermatophyte infections were the most common skin diseases (11.4%) among them ,tinea capitis was the highest overall prevalence (7.1%) in the study done by Ewaldo V Komba et al [(16)] in Dar es salaam.

4.2.6.4 Pityriasis versicolor (Tinea versicolor)

Pityriasis versicolor is a mild chronic infection of the skin caused by Malassezia yeasts and characterized by discrete, scaly, discolored or depigmented macules with a fine branny scaling. The upper trunk is most commonly affected followed by the upper arms, neck and the abdomen.

Treatment

Topical application of 2.5% Selenium sulfide solution once a week for 3 to 4 weeks, then once a month for 3 to 4 months is effective. Other agents are Topical Clotrimazole, Ketoconazole, Miconazole, Terbinafine. For extensive and persistent lesions, various systemic antifungals can be used such as oral Detoconazole 100 to 200 mg/day for 5 to 7 days, Fluconazole 50 to 100 mg single dose or Itraconazole 100 to 200 mg/daily for 5 to 7 days.

- Majid Zarrin et al [17] reported in their study that Pityriasis versicolor was the second most common disease among the children of 8 to 10 years and more frequent in male children than female.

- Prevalence of Skin Disorders in School Children in Ibadan, Nigeria revealed that dermatophytosis was the common skin disease of which Tinea Capitis and tinea versicolor was the commonest.

4.2.7 Pityriasis Alba

Pityriasis Alba is a common skin condition of unknown etiology occurring in children characterized by dry, fine scaled, pale patches on the face. It is most often seen in children between the age of 3 and 16 years and more common in males than females. Common sites are face (cheeks), but in 20% appear on the upper arms, neck or shoulders.

No treatment is required and the patches in time will settle. Redness, scale, itching if present may be managed with simple emollients or weak steroid.

- In a study by Dogra et al [18] in northern India among school children, the prevalence of Pityriasis Alba was 8.4%.

4.2.8 Tropical ulcer

Tropical ulcer is a common condition found mainly in children and teenagers in tropical regions. It usually affects the lower limbs causing the sudden appearance of regular and deep ulceration. It is mainly seen in Africa, India, and the western Pacific and in parts of Indonesia and the Philippines. The disease is caused by combined infection of number of different bacteria together with a Fusiform bacterium, Fusobacterium ulcerans.

The disease is associated with poor living conditions and exposure to water, particularly flood or stagnant water and mud. The lesion usually starts with mild discomfort and overlying hyper pigmentation on the skin that progresses rapidly over a few days until the skin breaks down and sloughs, revealing an underlying ulcer. The lesion is often clean on first presentation and round with smooth edges. It generally starts on the lower leg or ankle and in about 10 percent of cases it progresses to become an irregular, enlarged, and chronic ulcer.

Treatment

The management strategy depends on keeping the wound clean, by using local antiseptics and cleansing, such as potassium permanganate solution, chlorhexidine, or even saline and protecting the area from further abrasion or secondary infection with sterile dressings. No community strategies for preventing tropical ulcer are known, although the process of infection suggests that simple hygienic measures to disinfect and clean the affected limb might be an effective simple preventive regimen.

4.2.9 Common warts (Verruca Vulgaris)

Common warts are caused by Human Papilloma Virus (HPV) 1,2,4,7. They are most commonly present over the knees in children but also anywhere on the skin, characterized by firm papules with a rough, horny surface with size varying from 1 mm to over 1 cm in diameter.

More than 50% of warts disappear spontaneously within 2 years [20].Treatment of warts is done either by cauterization with 50 to 60% Trichloroacetic acid,Phenol, Podophyllin (15-20%), etc., or by Cryotherapy or CO2 Laser treatment.

- Verruca vulgaris (5.1%), was the second most common skin disease in their study on survey of skin infections and infestation among primary school children in eastern Taiwan by Wu YH et al [22]

4.2.10 Molluscum Contagiosum

This condition caused by Pox viridae is characterized by the appearance of umbilicated skin nodules. The incubation period varies from 14 days to 6 months. The individual lesion is shiny, pearly, white hemispherical, umbilicated papule which may show a central pore. It grows to a diameter of 5 to 10 mm in 6 to 12 weeks. The lesions spread frequently and are sometimes present in large number. After trauma or spontaneous recovery after several months, inflammatory changes result in suppuration, crusting and virtual destruction of the base. The most common sites affected are the limbs. But it may also affect the scalp, face, oral mucous membrane or any other part of the body.

Most cases are self limiting in 6 to 9 months. Lesions are treated by chemical cautery by 50 to 60% trichloroacetic acid, phenol or silver nitrate. The caustic is applied with either a needle or a tooth pick. Other options are electrodessication, cryotherapy or application of currently available Imiquimod, an immune modulator.

- Patel JK et al [13] reported Viral warts were the most common viral infections followed by Molluscum Contagiosum.

- Sharma et al [23] reported that Molluscum Contagiosum was the common viral infection among school going children.

4.2.11 Vitiligo

Vitiligo is an acquired, localized loss of melanocytes, resulting in depigmentation of the skin. It appears in early childhood and is very distressing. Well-circumscribed white macules and patches of otherwise normal skin occur symmetrically anywhere on the body with a predilection for the face, eyelids, neck and genitalia. The course is unpredictable. It may remain static, spread or resolve spontaneously.

Treatment

Treatment is generally unsatisfactory. Potent topical steroid creams are the mainstay of therapy. If there is repigmentation, weak steroid creams can be substituted as maintenance therapy. Calcipotriol cream which is primarily intended for psoriasis has also shown some benefit. Ultraviolet phototherapy can be very effective particularly in extensive cases.

4.2.12 Insect Bite Reactions

Numerous insects, e.g. mosquitoes, biting fleas, body lice, bed bugs, bees, ants, etc. come in contact with the skin. They may bite or lick or their bodies may get crushed on the skin due to pressure. This often leads to various grades of inflammation-acute, sub acute or chronic. It may be localized or widespread and with or without the general symptoms.

Community hygiene is very important individually local steroid, internal antihistaminic and antibiotics are all useful.

- Kaliaperumal Karthikeyan et al [5] reported that infestations and infections were the most common group of disorders (54.4%) in their study on Pattern of Pediatric Dermatoses in a Referral Center in South India. Among the disorders, Pyoderma and scabies were the most common bacterial and parasitic infections respectively.

- Libu et al [8] conducted a study on Prevalence and socio-demographic determinants of skin disease among lower primary school children in Calicut, Kerala with 919 study subjects in 2006 and found the overall prevalence of skin diseases to be 70.5%. Nearly 38.4% of subjects had at least one skin disease, 22.3% had 2 skin diseases and 9.7% had three or more skin diseases. The prevalence of transmissible skin diseases was higher than non transmissible skin diseases (61% and 31.8% respectively). Pediculosis capitis was the commonest transmissible skin disease with a prevalence of 52.6% followed by tinea versicolor (11.2%).

- Patel JK, et al [13] found impetigo (11.13%) and pyoderma (8.9%) as the most common skin diseases in their study. They recommended that the skin diseases can be controlled by proper environmental sanitation, improving nutrition, creating awareness among parents and children and avoiding overcrowding.

- In a school survey of 1161 children 1st to 5th standard between the age of 6 and 12 years by Rao et al [29], 76.65% students were found to have disorders of skin and its appendages.Nevoid conditions were the commonsest problem and Pediculosis capitis (4.13%) was the least in their study.

- Very high prevalence of skin diseases among female school children (98.6%) was noted in in Al-Khobar city, Eastern Saudi Arabia by Wafa Y. Al-Saeed et al [47]. The most common skin disease was pigmentary disorders (91.6%) followed by a group of dermatitis/eczema (26.7%).

- A study on the Pattern of pediatric dermatoses in rural areas of central India by Vikas Bhatia et al [10] reported high prevalence (51.95%) in the rural areas. In their study, Pediculosis capitis was the leading presentation - found in 136 children (20.4%) which were four times more in the girls.It was followed by pyoderma in 16.1% and dermatophytosis in 6.6%. Among non-infectious dermatoses, Pityriasis Alba, Pityriasis capitis, Acne vulgaris and Eczema were the major problems. Poor socio-economic status, high illiteracy rate, poor hygienic and sanitary conditions contributed to the high prevalence of dermatoses in their study population.

- The overall prevalence of skin disorders was 19.23. High prevalence rate was noted for nevi (12.87%), head lice (11.01%), Pityriasis alba (7.99%) and alopecia (6.09%) in a study done by Zimmo et al [37].

- Prevalence of scabies among children aged 6 to 15 years was 8.2% which was higher among boys than girls and higher among Muslims than Hindus in a study done by SB Rotti et al [6].

- Scabies was the leading parasitic infestations, among the fungal infections tinea capitis, tinea corporis was high among school going children with male preponderance as reported by R C Sharma et al [23] in New Delhi.

- The prevalence of dermatophytoses and pityriasis versicolor was very low. A low atmospheric humidity due to lack of rain in this region probably accounted for the low figures of those skin diseases as reported by Sharma NL et al [(35)].

- Perez-Gonzalez M et al [(32)] in Spain reported a low prevalence of tinea capitis and tinea unguium in School children of Barcelona with 0.23% and 0.15% respectively

- Fungal infections were the second largest group of disorders, the warm and highly humid climate of the state may account for the high incidence of fungal infections as reported by Devi et al [(50).]

- RA Valia et al in Varanasi reported the prevalence of skin diseases among school children as 53.6% .This high prevalence was probably because of more students from government schools and the lower socioeconomic groups in their study.

- Amin TT et al [(17)] found the prevalence of transmissible skin diseases to be 27.2% among male primary school children in Al Hassa, Saudi Arabia. The Common skin diseases were superficial infections (fungal, bacterial and viral), eczema, and infestations (Scabies/Pediculosis).They found that large family size was a positive predictor for Pediculosis and fungal infections .Higher maternal educational status might be protective against both lesions. Frequent showering and high family income were negative predictors for the infectious (transmissible) diseases.

- Overcrowding, Poor housing conditions, Lack of awareness of personal hygiene were accounted for the high prevalence of contagious diseases in their study population reported by Sharma NL et al [28]

- Sabyasachi Banerjee et al [25] done a study on seasonal variation in pediatric dermatoses. Impetigo, furunculosis, miliaria and papular urticaria showed sudden shoot up when the patient enters the toddler age group. This may be attributed to the exposure to external environmental factors away from the cozy protection of home as well as increased physical contact with neighbors as the baby learns to walk. According to their study, the six most common skin diseases of under-five children were impetigo (221 cases), miliaria (190 cases), scabies (148 cases), furunculosis (133 cases), seborrheic dermatitis (118 cases) and papular urticaria (94 cases) in their sample of 859.

- In a study done by K.S.Negi et al [36] et al the prevalence of infectious skin diseases was 50.9% in their population of < 14 years. They also noted poor hygiene and sanitary conditions, lack of awareness among parents in their study group.

- Huekelbeg et al [41] showed that age < 15 years, female sex, living in the urban slums were the independent factors contributing to the simultaneous coinfestation with pediculosis capitis and scabies.

- A study done by Khokhar [38] et al in delhi reported that Pediculosis capitis was common among children aged 6 – 12 years, and the school environment helped in the spread of infestation. The pattern of transmission was also largely influenced by the family size and number of school aged children in the family.

- A study on Parental factors of skin infections and infestations among primary school children in Ijesa-land, Nigeria done by Oyedeji et al [45] found that low maternal education and low socio economic status were the risk factors for the high prevalence of infections and infestations in their study group.

- Robert et al [49] reported that the highest incidence rates of skin diseases were seen in the lower SES classes. The incidence rate of skin diseases remained stable in SES class III. In all other SES classes, the incidence rate has decreased between 1987 and 2001.

- SA Adefemi et al [43] in their study on prevalence of dermatophytosis among primary school children found that high prevalence of dermatophytosis was seen in the age group of 9 – 12 years and male children was commonly affected. Overcrowding, sharing of personal things and poor personal hygiene were seen among them.

METHODOLOGY

5. METHODOLOGY

5.1 STUDY DESIGN

Cross - Sectional study.

5.2 STUDY AREA

Chennai primary schools of Pulianthope Zone, Chennai.

The Chennai Corporation GOVERNMENT PRIMARY SCHOOLS were renamed as **CHENNAI PRIMARY SCHOOLS. (C.P.S)**

5.3 STUDY PERIOD

March 2011 to November 2011

5.4 STUDY POPULATION

All Children studying from I standard to V standard in Chennai Primary Schools of Pulianthope zone. (Zone3).

Exclusion Criteria:

1. Children absent on two repeated visits in a week's interval to the school.

2. Parents not willing to give consent for the study.

5.5 SAMPLE SIZE

A study done by Dr. Libu G.K et al [8] on Prevalence and socio-demographic determinants of skin disease among lower primary school children in Calicut, Kerala reported that the prevalence of transmissible skin diseases was 61%.This was taken as a basis for the calculation of the sample size for this study as transmissible skin diseases are of public health importance.

At 95% confidence interval, Z alpha = 1.96, p=61%, q= 39%, d allowable error of 8% of 61% = 4.88

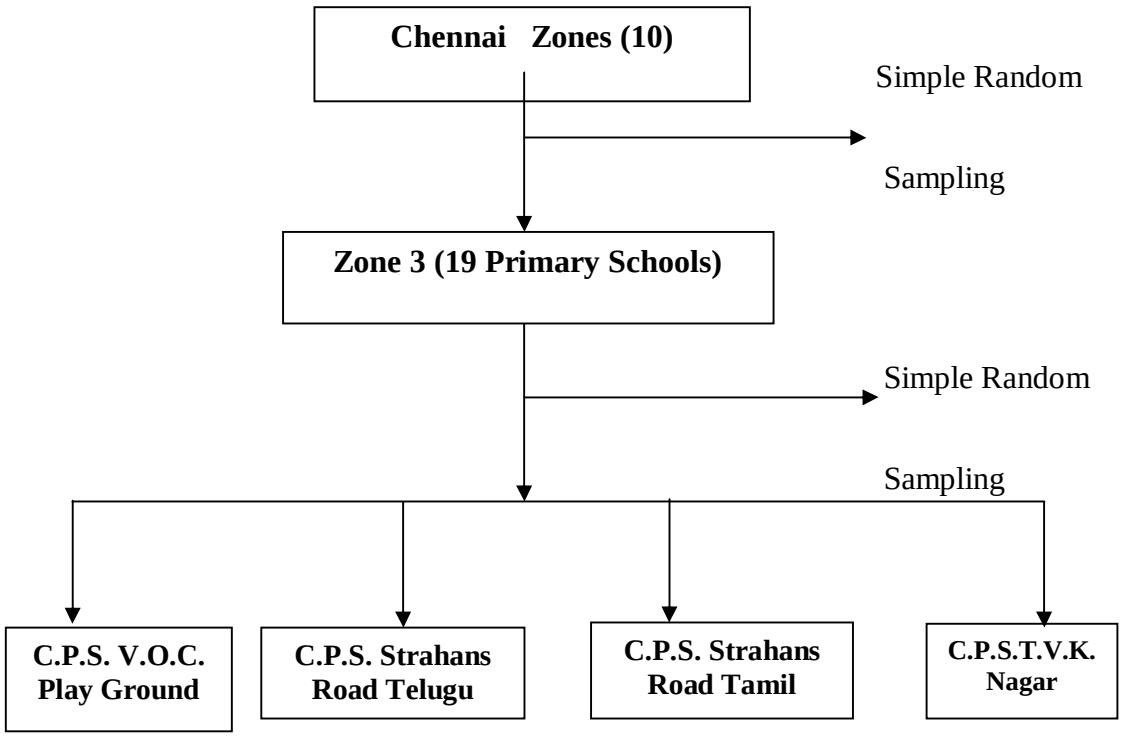
$$\text{Sample size } N = \frac{Z_{\alpha}^{2}\, P \times Q}{d^{2}}$$

$$\text{Sample size } N = \frac{1.96 \times 1.96 \times 61 \times 39}{4.88 \times 4.88} = 384$$

Assuming 10% of non-responsiveness, the sample size was calculated to be 422

5.6 SAMPLING METHOD

Two stage random sampling has been used in this study. Among the Ten Zones in Chennai City, Zone 3 was chosen randomly by lottery method. Zone 3 contains 19 Chennai Primary Schools. An updated list of all Chennai primary schools in Zone 3 (Annexure VI) obtained from Assistant Educational officer of Zone 3 which was used as a sampling frame.



School Number	Total Number Of Children In The School	Children Examined At First Visit	Children Examined At Subsequent Visits	Total Number Of Children Examined
1	122	88	16	104
2	20	10	5	15
3	90	59	13	72
4	280	198	36	234

In the present study, absenteeism rate ranged from 15% to 25% even after subsequent visits. The reasons for this absenteeism were Economic Problems, family burden like looking after their siblings as both the parents were working, etc. But health problems did not account for the absenteeism. Hence these children were excluded from the study.

Finally **425** children and their parents or available family member at the time of home visits were participated in the study.

5.7 DATA COLLECTION

Data collection was started after obtaining permission from the Director, Institute of Community Medicine, Institutional Ethical Committee (IEC), Joint commissioner Educational Department - Corporation of Chennai, City Health Officer - Chennai, Assistant Educational Officer Zone 3 -Corporation of Chennai and the Headmasters/Headmistress of the selected schools.

The complete address of each child was obtained from the school records.

The informed consent was obtained from the parents by the following way:

1. The parents who came to receive their children after the school hours, was gathered in a class room with the help of the school teachers.

2. The parents who could not be contacted in the schools were approached by home visits to get informed consent after a brief introduction of the study.

3. The working parents were contacted at their homes during the morning hours to get informed consent.

Children were examined in the school campus in a separated room allotted by the school Headmaster/Headmistress. The personal hygiene of the child was noted by head to foot examination followed by examination of the skin in the sunlight after removal of the dress by the child. The investigator was accompanied by a dermatologist for confirmation of skin diseases.

After examination of the child, the data was obtained from the parents or available family members at the time of home visit by the investigator. The data was collected by using semi structured, standardized, pretested questionnaire in Tamil language (local language) from the parents or available family members. A Questionnaire constructed for this study contains questions on Socio demographic characteristics like religion, educational status, occupation of the parents, socio economic class, overcrowding, sanitation, source of water supply, and frequency of bathing their child etc. The questions were standardized to local social and cultural norms, values and religious beliefs. The questionnaire was pretested with 30 parents in the same Zone. Based on the observations made during the pre-testing, necessary changes were made in the questionnaire. The results of the pre-test were not included in the final analysis.

Children who had skin diseases were noted separately and the medicines were given to their parents during home visits. They were referred to the Pediatric dermatology OPD, ICH (INSTITUTE OF CHILD HEALTH), Egmore, Chennai for further follow up and treatment. Health education regarding personal hygiene of the child and prevention of skin diseases was given to the parents or the available family members at the time of home visits.

5.8 DATA ANALYSIS

Data was entered in Microsoft Excel Sheet and analyzed using Excel and SPSS (Statistical package for social science) 18 th version. The results were expressed in Proportions and Percentages. The association between the various factors and Skin diseases were analyzed by Chi Square test, Fisher's Exact test. A "P" value < 0.05 was considered to be statistically significant.

5.9 OPERATIONAL DEFINITIONS [1], [9], [20], [21], [52], [53]

Macule: Flat, circumscribed change in skin color less than 1 cm in diameter.

Patch: Flat, circumscribed change in skin color greater than 1 cm in diameter.

Papule: Solid, elevated, superficial lesions less than 1 cm in diameter.

Vesicle: Elevated, superficial fluid filled lesion, less than 5 mm in diameter.

Nodule: Solid elevated lesions with depth in to the underlying tissue, diameter up to 1 cm

Bulla: Elevated, superficial fluid filled lesion greater than 5 mm in diameter.

Pustules: Papule or vesicle filled with free pus.

Scale: Accumulation of loose superficial fragments of stratum corneum

Crust: Scab with dried exudates of serum and pus.

Erosion: Superficial loss of Epidermis.

Erythema: Blanchable redness.

Scabies: Lesions are papules, vesicles, pustules, and nodules. The characteristic lesions of scabies are burrows which appear as slightly raised, brownish tortuous lesions.

Pediculosis capitis: lice in the scalp or nits glued to the hair shaft in the retro auricular and occipital region of the scalp.

Impetigo: Pustules having lower half filled with dense pus. Honey-colored crusting is important. In some cases, the only sign is mild erosion with crusting and the peripheral spread.

Impetigo contagiosa: Thick honey colored crust covering superficial erosions follows rupture of thin walled superficial vesicle or pustules with an erythematous halo.

Miliaria Rubra: Erythematous papules and papulo vesicles, about 1-4 mm in diameter on a background of macular erythema.

Eczema: Pruritic papulo vesicular lesions of acute phase is characterized by erythema, edema, oozing and crusting, chronic phase is characterized by Lichenification (Thickened skin, increased skin markings, and pigmentation).

Tinea corporis: Annular (active border), itchy, erythematous, scaly patches with central clearing. The active border consists of papulo vesicular lesions and advancing scales.

Tinea faciei: Annular papules or flat patches of erythema in the face.

Tinea capitis: Oval or round pink, scaling patches on the scalp skin and areas of hair loss due to breakage of hair shafts.

Tinea Pedis: Itchy maceration, scaling and fissuring or scaly erythematous plaque lesions on soles or palms. Borders are distinct.

Pityriasis versicolor: Hypo pigmented and hyper pigmented well defined, multiple, mildly itchy macules with fine branny (powdery) scales.

Pityriasis Alba: Dry, fine scale, pale patches or round patches of depigmentation on the face particularly over cheeks and around the mouth.

Molluscum Contagiosum: skin colored to milky white, shiny, umbilicated papules of 2- 6 mm size commonly seen at face, extremities and trunk.

Common warts (Verruca vulgaris: circumscribed, firm papules with a rough, horny surface, and a size of 1 mm to over 1 cm in diameter.

Vitiligo: Well-circumscribed white macules and patches of otherwise normal skin occur symmetrically.

Insect bite reactions: Papules (or) papulovesicular lesions seen over the exposed areas of body such as Fore arm, legs, etc.,

- Modified Kuppuswamy's Socio Economic status scale was used to assess the socio economic status of the study population.[51]

- **Overcrowding Criteria [19]:**

  The degree of overcrowding expressed as the number of persons per room.

  The accepted standards are:

For 1 Room: 2 Persons

2 Rooms: 3 Persons

3 Rooms: 5 Persons

4 Rooms: 7 Persons

5 or more Rooms: 10 Persons

If more than this standard is called as overcrowding.

RESULTS

6. RESULTS

The study estimated the prevalence of Common Skin diseases among the primary school children in Government schools and the factors associated with skin diseases. The study was conducted in 4 Government Primary Schools under Zone 3 of Chennai Corporation, which were randomly selected by lottery method. 425 Children and their parents or available family members at the time of home visits were participated in the study.

6.1 SOCIO DEMOGRAPHIC PROFILE OF THE STUDY POPULATION

6.1.1 Age distribution

The age of the children was ranged from 5-11 yrs. The mean age was 8 years. Among the study group 18% of them were in the age group of 5-6 years, 40% of them were in the age group of 7-8 years, and 42% of children between 9-11 yrs.

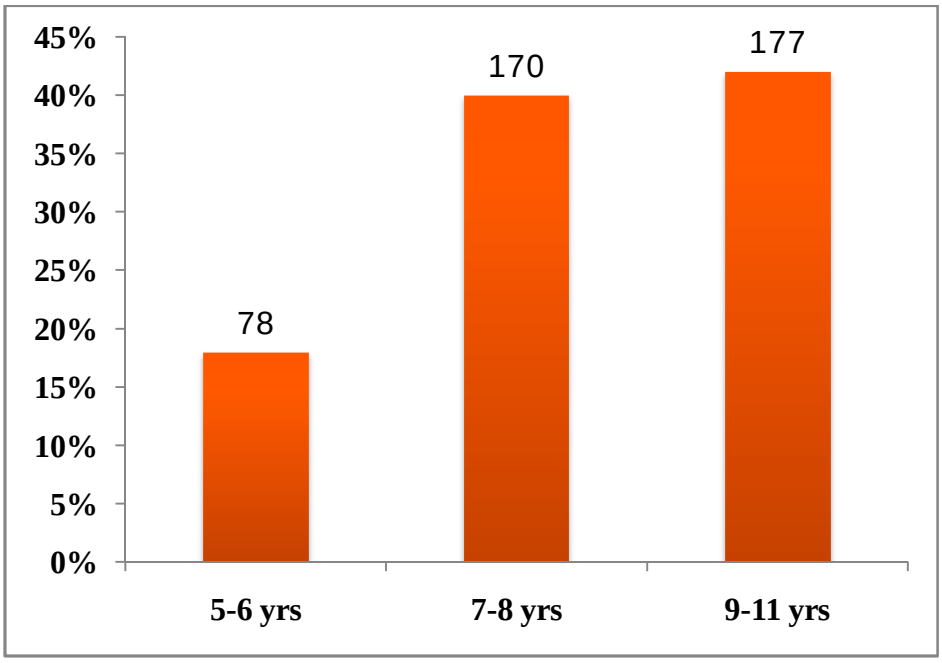


Figure 1: Age distribution

6.1.2 Sex

Regarding the sex, 51% were male children and 49% were female children.

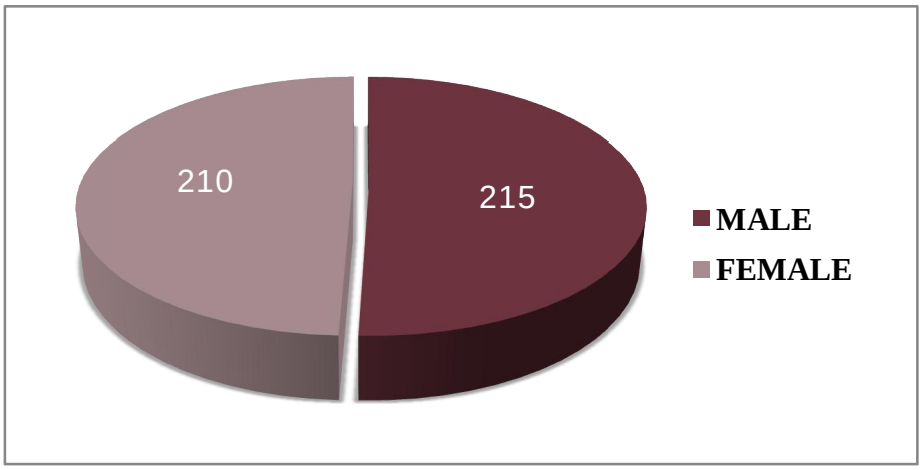


Figure 2: Sex distribution of the children

6.1.3 Religion

Among the study group, 50% were Hindus, 45% were Muslims and 5% were Christians.

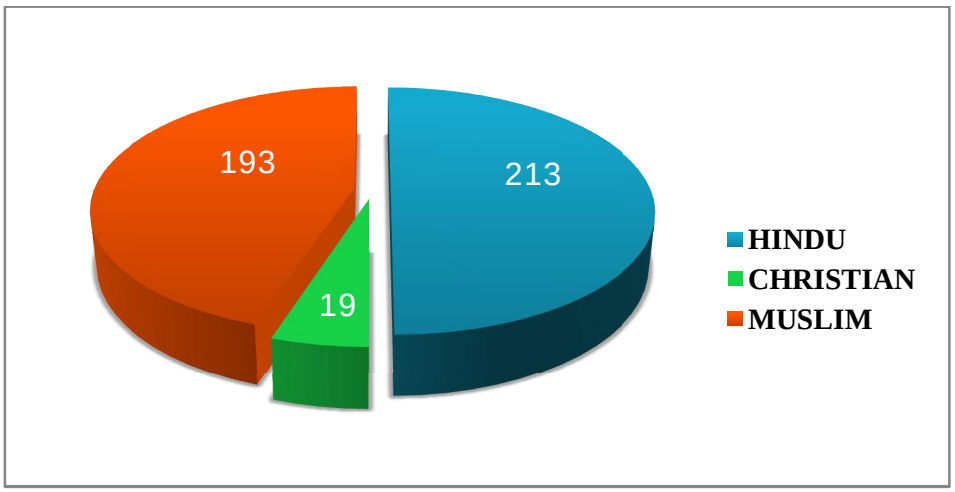


Figure 3: Religious status of the study population

6.1.4 Education of the parents

Among the fathers education 96% were literate and 4% were illiterate. Majority of the literate had High school education (56%), 37% had only Primary education 1% had Higher secondary school education, and 2% were Graduates.

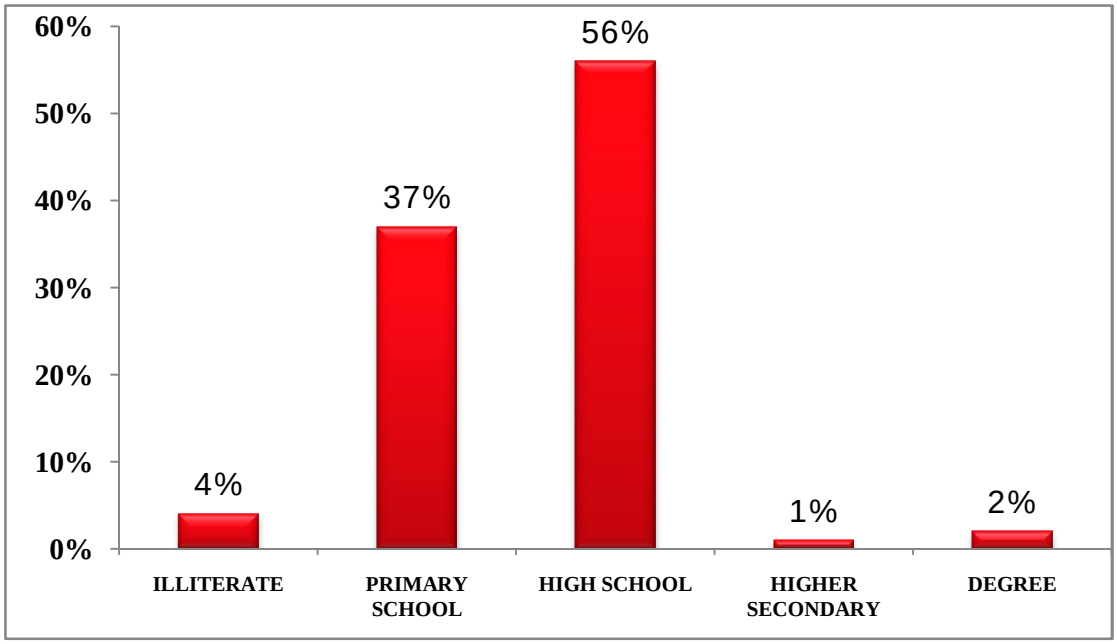


Figure 4: Education of father

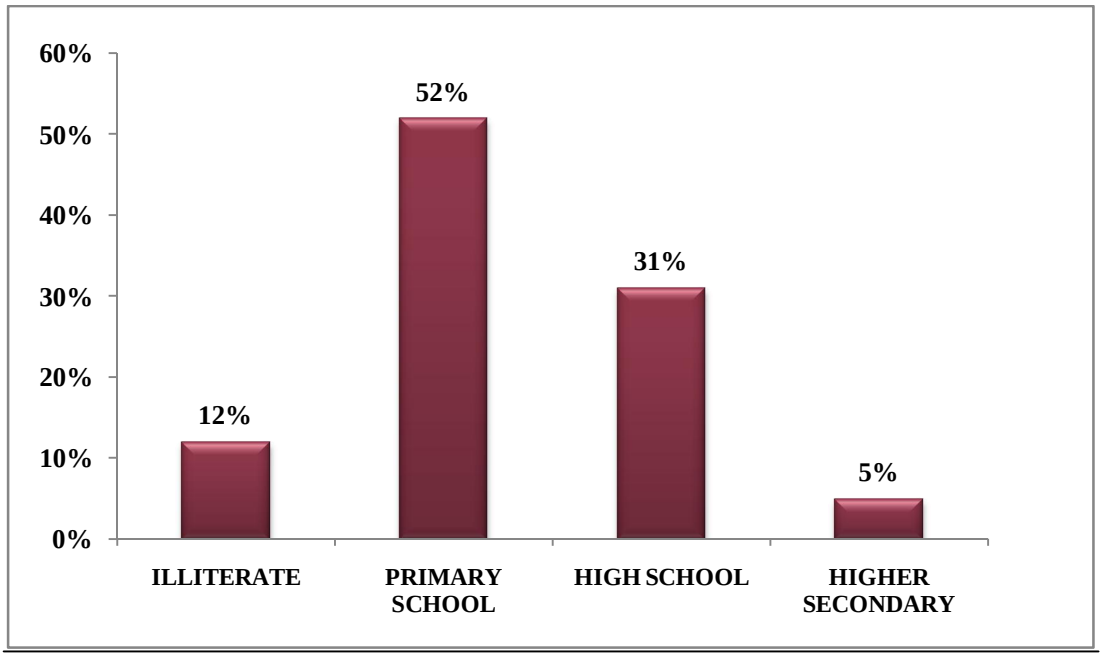


Figure 5: Education of mother

Among the mothers education 12% were illiterate, and 88% were literate.52% had primary school education,31% had high school education,and 5% were finished higher secondary school edcuation.

6.1.5 Socio economic status

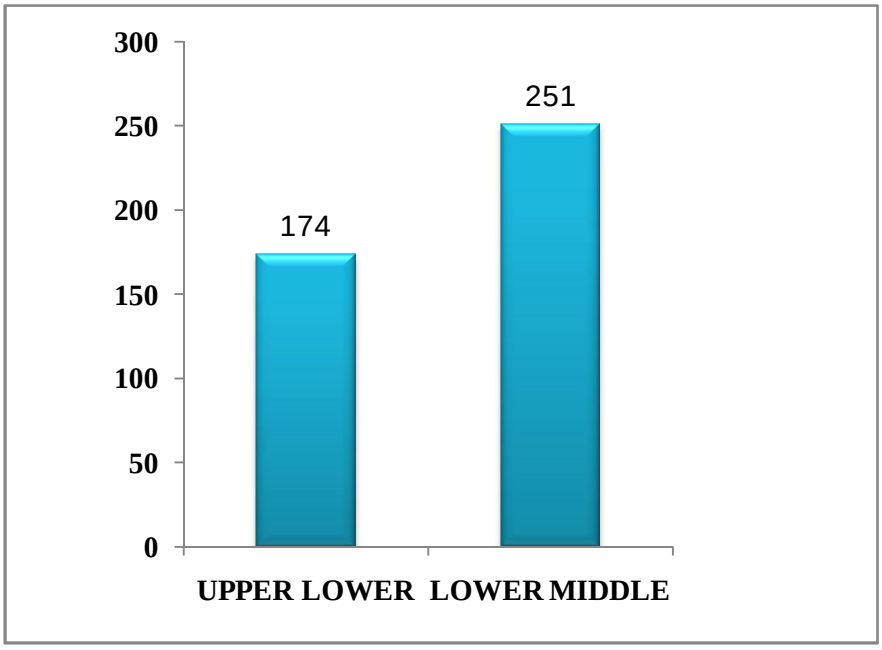


Figure 6 :Socio Economic status

Based on Modified Kuppusamy scale for socio economic status,lower middle constituted 59% and upper lower constituted 41%.

6.1.6 Type of house, Over crowding

15% were living in pucca house and 85% were living in semi pucca house, 92% of study population were living in overcrowded houses and only 8% of study population were living in non overcrowded houses.

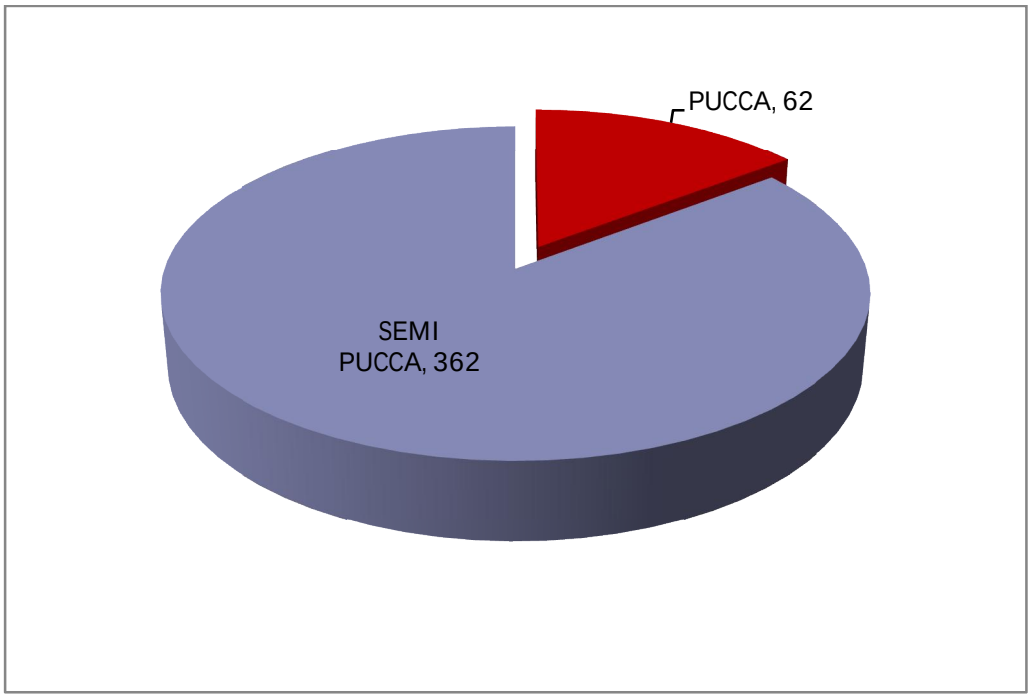


Figure 7: Type of house

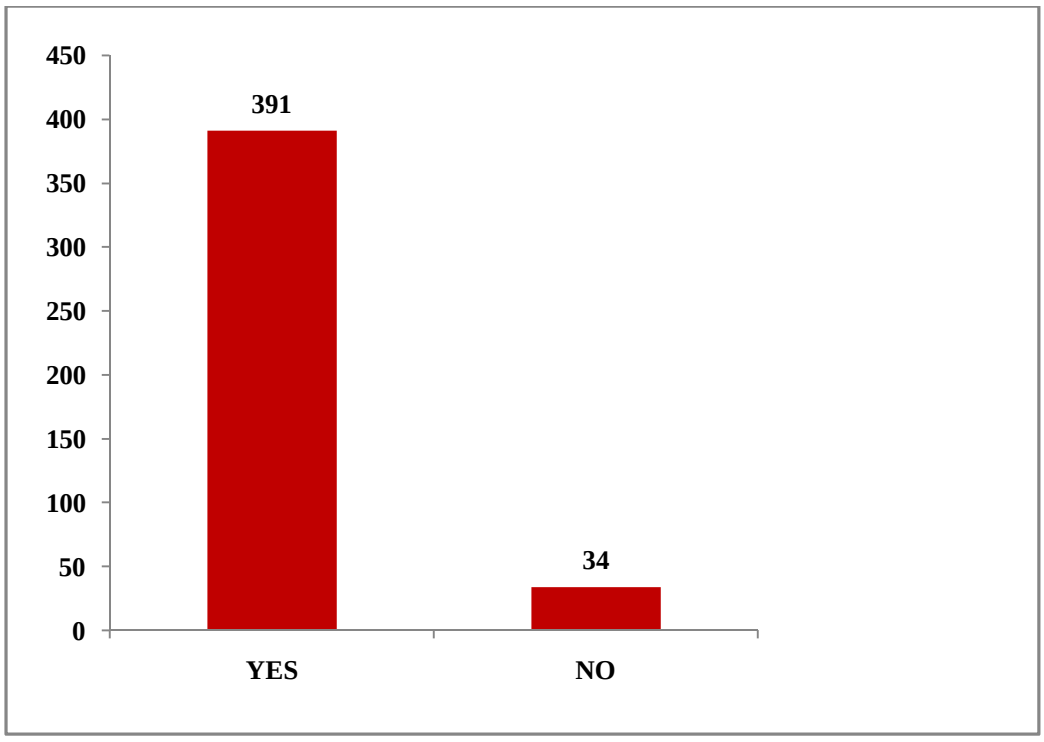


Figure 8: Over crowding

6.1.7 Sharing the same room for sleeping

91% were sharing the same room for sleeping and 9% were not sharing.

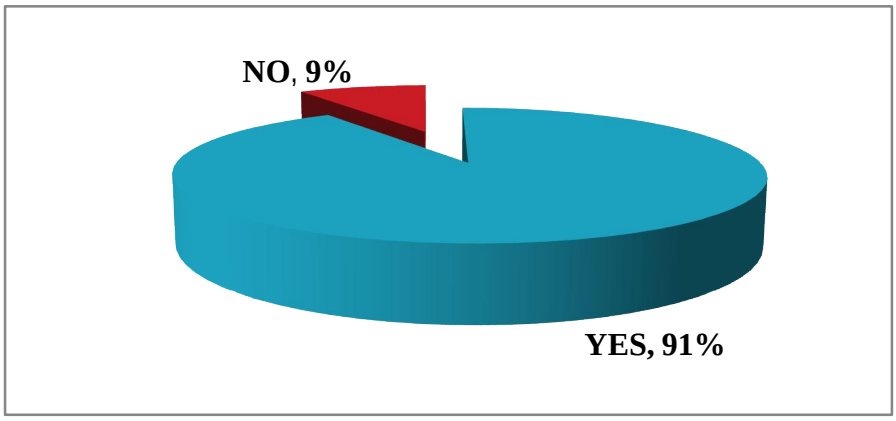


Figure 9:Sharing the same room for sleeping

6.1.8 Source of water for washing, bathing purposes

46% were used the corporation lorry water, 49% were used the corporation pipe water and only 5% were used the hand pipe for bathing, washing purpose.

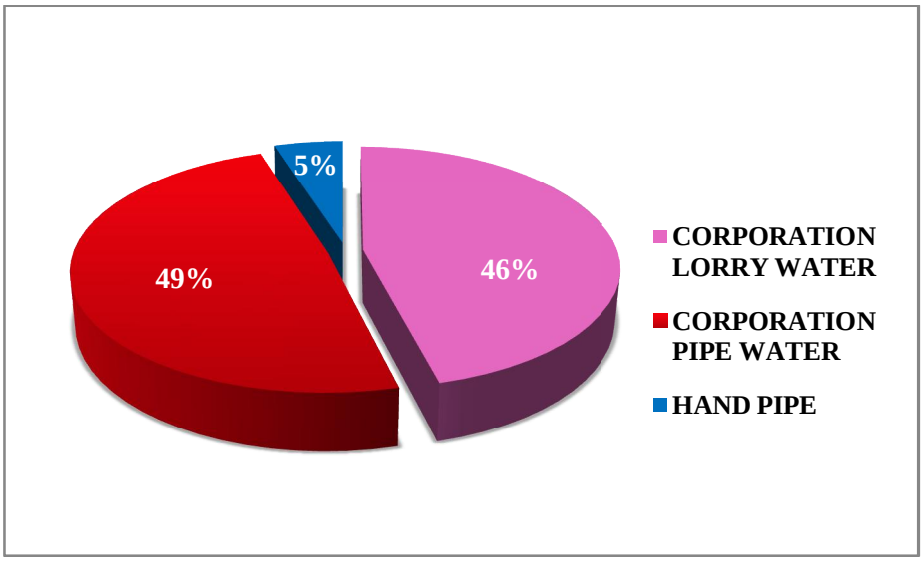


Figure 10: Source of water

6.1.9 Toilet facility in the houses

Only 19% were having toilet facility in their house, 81% were not having toilet facility in their house and their children were defecating in open air.

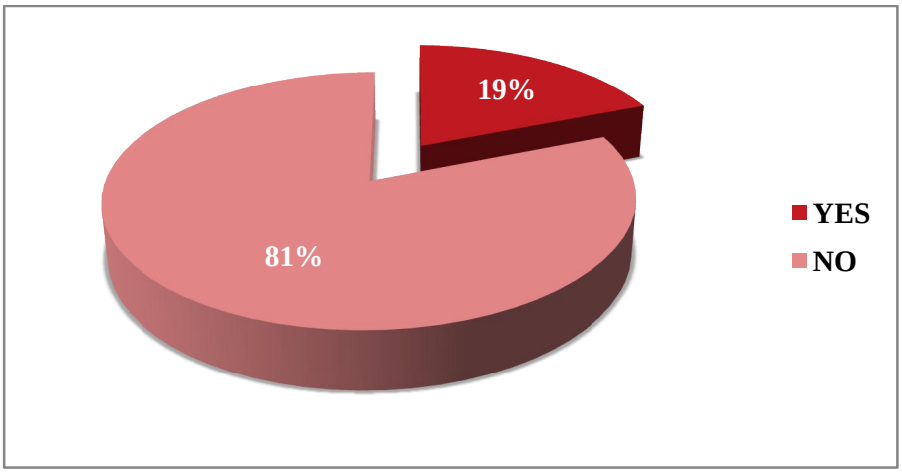


Figure 11: Toilet facility

6.1.10 Bath to child

76% of children had taken bath daily, 24% of children had not taken bath daily.

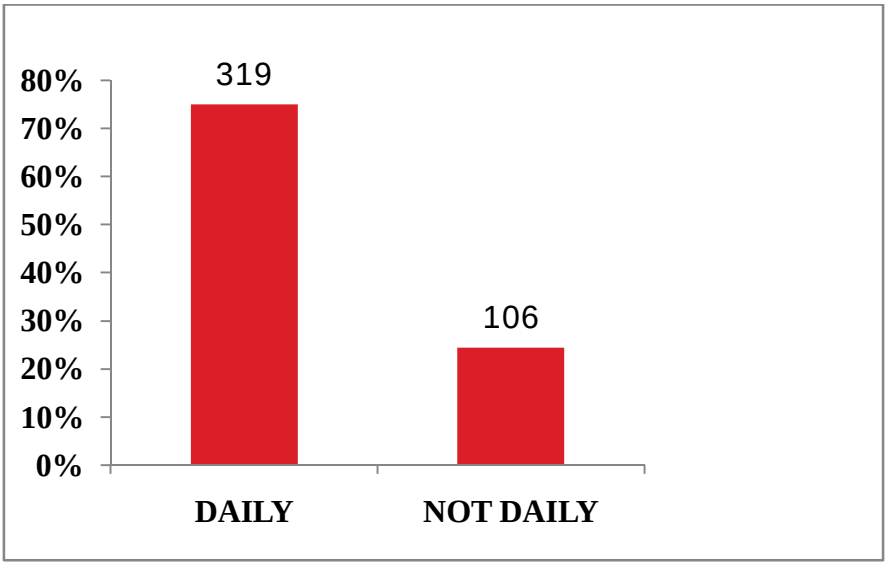


Figure 12: Bath to child

6.1.11 Wearing washed clothes daily, Nail clipping

62% children had worn washed clothes daily and 38% of children had not worn daily washed clothes.

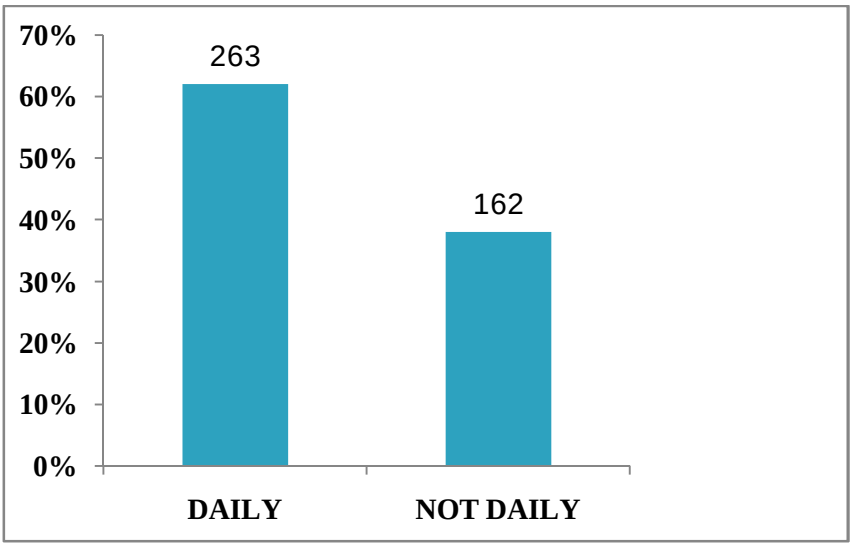


Figure 13: Wearing washed clothes

Only 10% of childrens parents or family member's had cut the nails to the child regularly at once a week. 90% had not cut the nails to their children

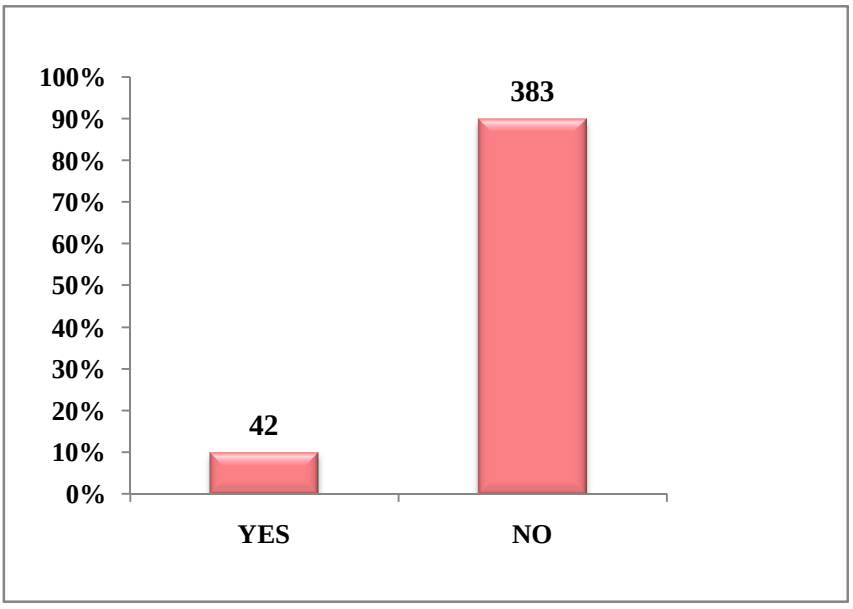


Figure 14: Nail clipping

6.1.12 Skin diseases in the family

84% children not having family history of skin diseases, 1% had skin diseases in the family and 15% did not know.

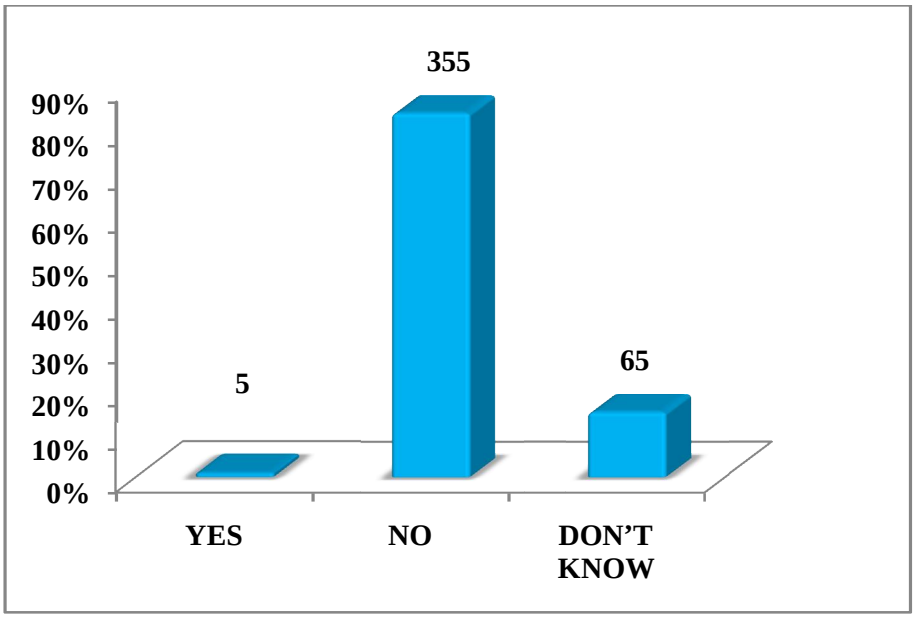


Figure 15: Skin diseases in the family

6.2 PERSONAL HYGIENE

6.2.1 Cleanliness of school dress

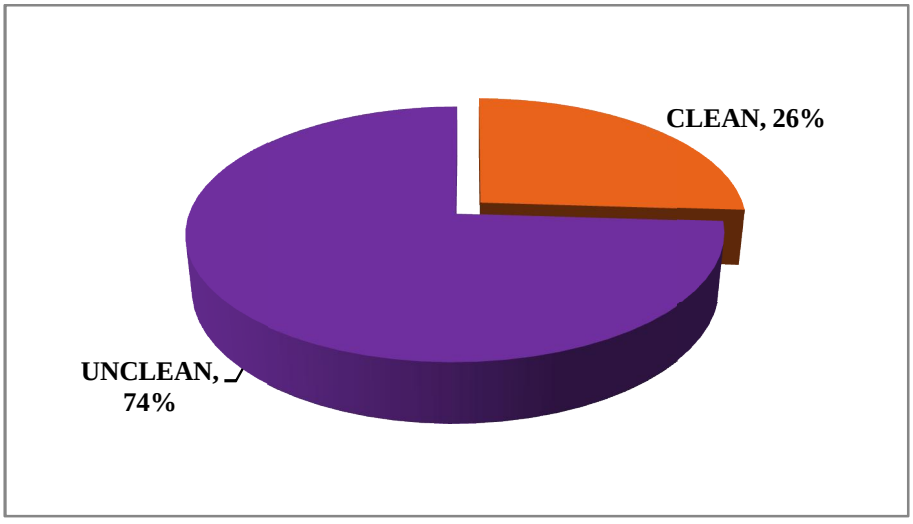


Figure 16: Cleanliness of school dress

26% of children wore clean school dress and 74% of children wore unclean dress.

6.2.2 Personal Hygiene: Hair

Among the children 59% had dandruff in the hair and 41% had clean hair.

6.2.3 Cleanliness of Nose

28% of children had nasal discharge.

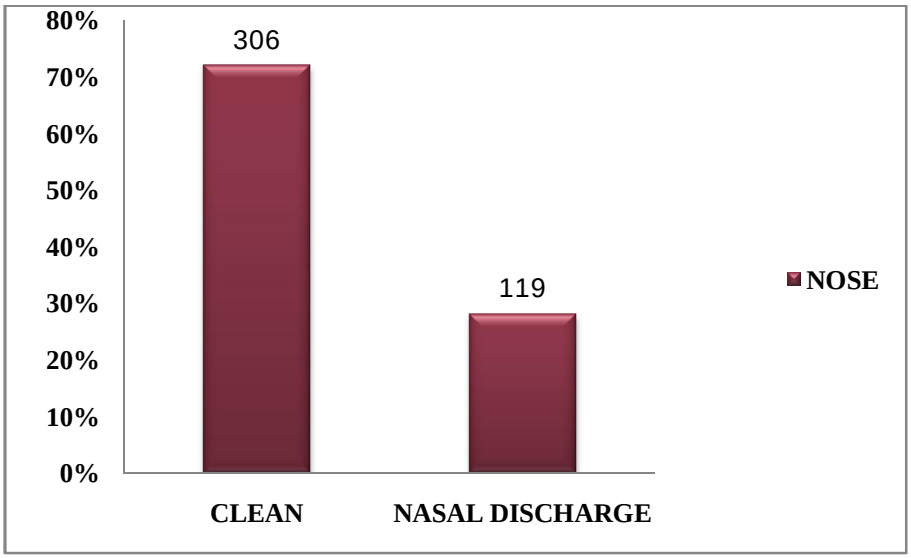


Figure 17: Cleanliness of Nose

6.2.4 Cleanliness of Ear

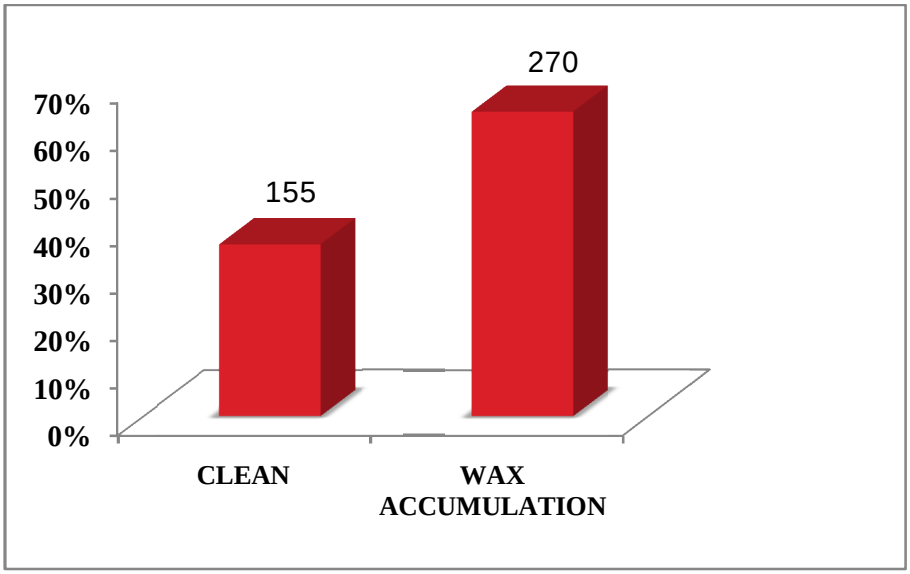


Figure 18: Cleanliness of Ear

64% of children had wax accumulation in the ear at the time of examination.

6.2.5 Personal Hygiene : Teeth

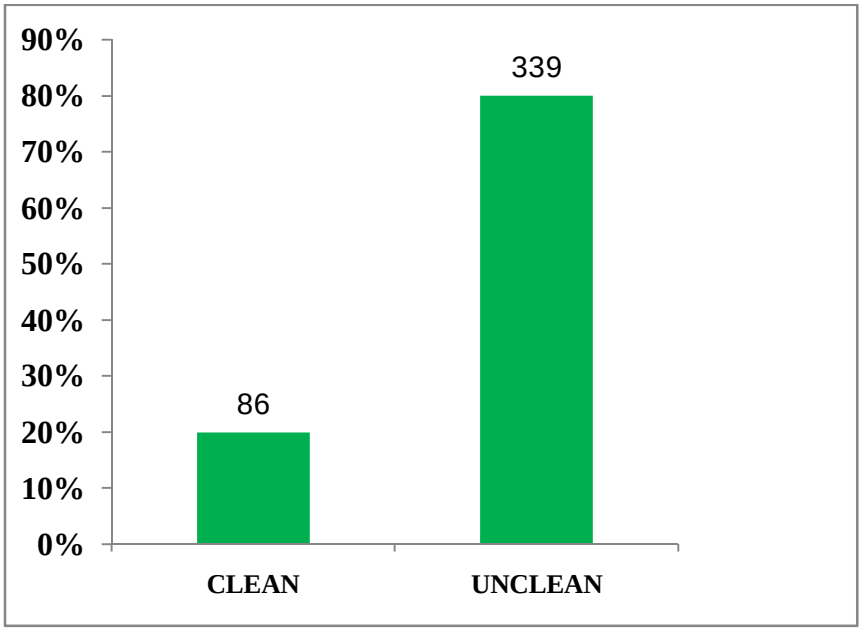


Figure 19: Personal Hygiene : Teeth

80% of children were found to have unclean teeth.

6.2.6 Dental caries

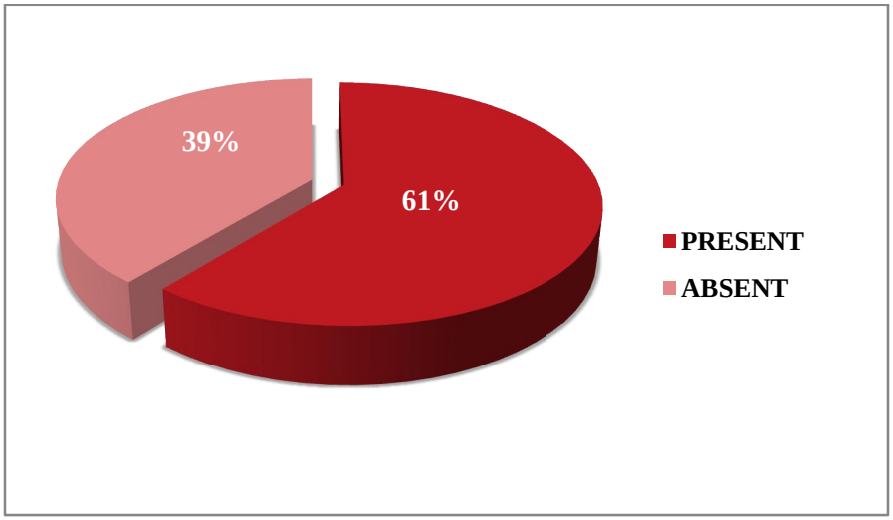


Figure 20: Dental caries

61% of children had dental caries.

6.2.7 Personal hygiene: Nails

90% children had unclean nails.

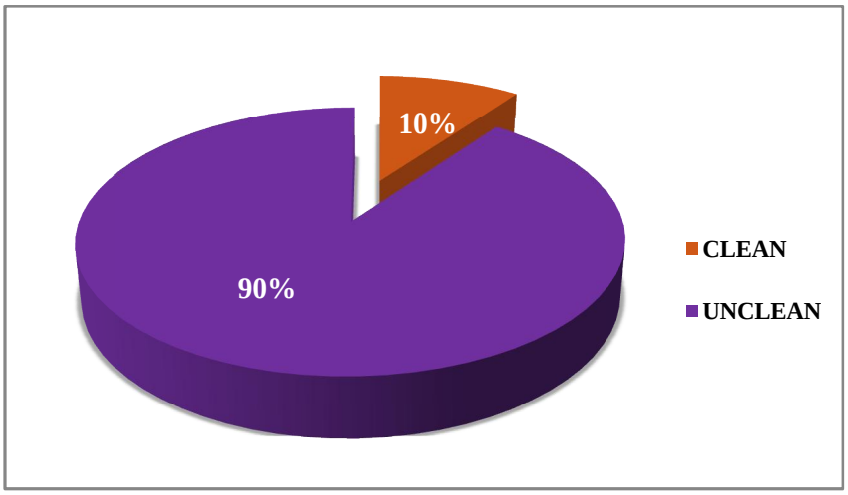


Figure 21: Nails

6.2.8 Personal hygiene -Bad body odor,Bare foot

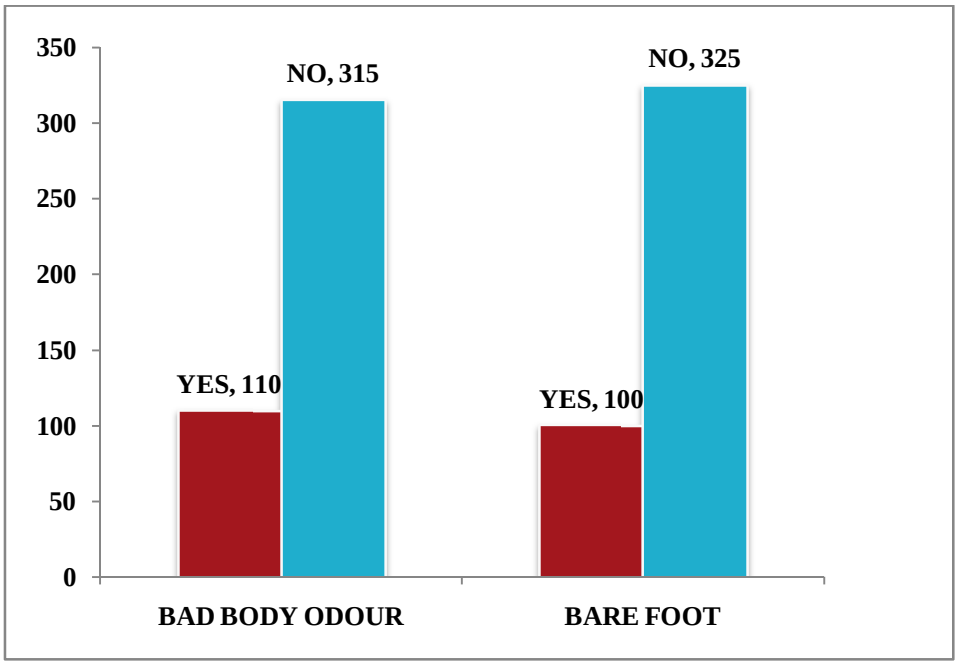


Figure 22: Bad body odour, Barefoot

Bad body odor was present among 26% children and 24% of children were barefoot at the time of examination.

6.3 PREVALENCE OF SKIN DISEASES

6.3.1 Overall Prevalence of skin diseases

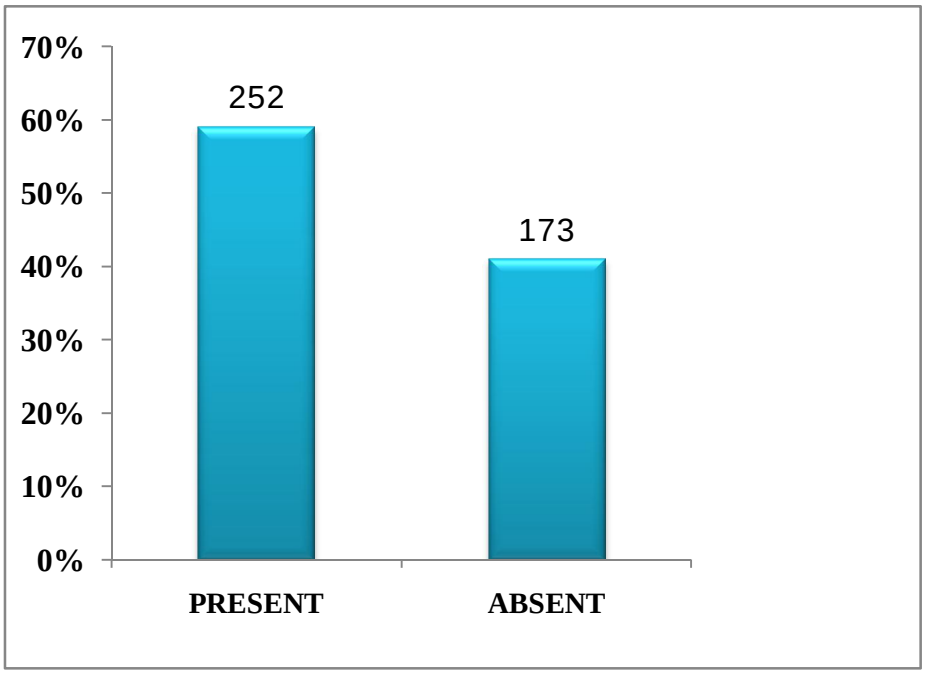


Figure 23: Overall Prevalence of skin diseases

59% of children had skin diseases and 41% found to be normal.Among them 55% children had one skin diseases,4% had two skin diseases.

6.3.2 Prevalence of individual skin diseases

Pediculosis capitis was the commonest one which contributed 15%, other diseases were Miliaria rubra (14%),Impetigo 12.2%, Scabies 7.1%, Pityriasis Versicolor 4.5%, Insect bite allergy 4%, Pityriasis alba 4%, Eczema1%, Molluscum contagiosum1%, Common warts1%, Insect bites allergy1%, Tinea corporis1%, Tinea capitis 0.2% and Tinea pedis 0.2%.

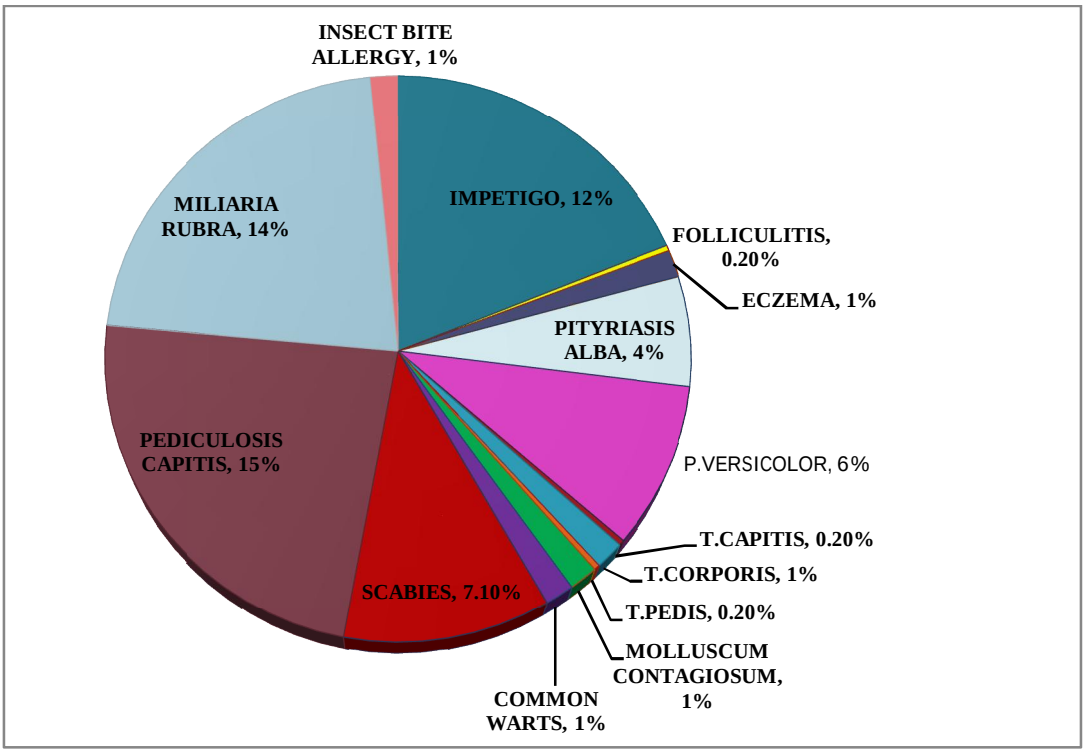


Figure 24: Individual Skin diseases

6.4 STATISTICAL ANALYSIS OF VARIABLES AND SKIN DISEASES

6.4.1 Age group and Skin diseases

Table 3: Age group and Skin diseases

Age Group	Skin Diseases	
	Present	Absent
5 – 6 Years	45(58%)	33(42%)
7 - 8 Years	104(61%)	66(39%)
9 – 11 Years	103(58%)	74(42%)

Chi-Square 0.422 df 2 P = 0 .810 (Not significant) (0.05)

The prevalence of skin diseases were 58%, 61%, 58% among the age group of 5-6, 7-8, 9-11 years. However the difference was not statistically significant.

6.4.2 Sex and Skin diseases

Table 4: Sex and Skin diseases

Sex	Skin Diseases	
	Present	**Absent**
Male	124(58%)	91(42%)
Female	128(61%)	82(39%)

Chi-Square 0.473 df 1 P = 0.492 (Not significant) (0.05)

The prevalence of skin diseases among female children was 61%, among male children was 57.7%. The difference was not statistically significant.

6.4.3 Religion and Skin diseases

Table 5: Religion and Skin diseases

Religion	Skin Diseases	
	Present	**Absent**
Hindus	126 (59%)	87 (41%)
Christians	9 (47%)	10 (53%)
Muslims	117(61%)	76 (39%)

Chi-Square 1.26 df 2 P = 0.532 (Not significant) (0.05)

The prevalence of skin diseases among Hindu, Christian, and Muslim was 59% 47%, 61% respectively. Skin diseases among religion were not statistically significant.

6.4.4 Mother's education and Skin diseases

Among the study population the prevalence of skin diseases decreased with increased mother's education. This was found to be statistically significant. (Table 6)

Table 6: Mother's education and Skin diseases

Mothers Education	Skin Diseases	
	Present	**Absent**
Illiterate	49 (94%)	3 (6%)
Primary School	160 (73%)	60 (27%)
Middle School	37 (29%)	93 (72%)
Higher Secondary School	6 (26%)	17 (74%)

Fisher's Exact test, P = .000 (Significant)

6.4.5 Socio Economic status and Skin diseases

Table 7: Socio Economic status and Skin diseases

Socio Economic Status	Skin Diseases	
	Present	**Absent**
Upper Lower	5 (17%)	24 (83%)
Lower Middle	247 (62%)	149 (38%)

Chi-Square 22.804 df 1 P = 0.001 (Significant) (0.05)

The prevalence of skin diseases was found to be high among the children belongs to lower middle than children belong to upper lower. This difference was found to be statistically significant.

6.4.6 Type of house and Skin diseases

Prevalence of skin diseases among children living in pucca house was 51% and Semipucca pucca house was 61%. However the difference was not significant**.**

Table 8: Type of house and Skin diseases

House	Skin Diseases	
	Present	**Absent**
Semi Pucca	220 (61%)	143 (39%)
Pucca	32 (52%)	30 (48%)

Chi-Square 1.774 df 1 P = .183 (Not significant) (0.05)

6.4.7 Number of persons in the family and skin diseases

Table 9: Number of persons in the family and Skin diseases

Number Of Persons House	Skin Diseases	
	Present	**Absent**
≤ 4	108 (50%)	110 (50%)
> 4	144 (70%)	63 (30%)

Chi-Square 17.639 df 1 P = .000 (Significant) (0.05)

Family members more than 4 showed high prevalence than families with less than 4 members. The difference was statistically significant (Table 9).

6.4.8 Number of rooms in house and Skin diseases

The prevalence of skin diseases and the number of living rooms in the family found to be statistically significant.(Table 10)

Table 10: Number of rooms in the house and Skin diseases

Number Of Rooms	Skin Diseases	
	Present	**Absent**
One Room	25 (89%)	3 (11%)
Two Rooms	221 (60%)	145 (40%)
More Than Two Rooms	6 (19%)	25 (81%)

Fisher's Exact test, P.000 (Significant)

6.4.9 Overcrowding and Skin diseases

Table 11: Overcrowding and Skin diseases

Over Crowding	Skin Diseases	
	Present	**Absent**
Yes	243 (62%)	148 (38%)
No	9 (27%)	25 (73%)

Chi-Square 16.497 df 1 P =.000 (Significant) (0.05)

The prevalence of skin diseases was 62% among overcrowded houses and 27% among non overcrowded houses. This difference was highly statistically significant.

6.4.10 Entire family sleeping in the same room and Skin diseases

Table 12: Sleeping in the same room and Skin diseases

Same Room	Skin Diseases	
	Present	**Absent**
Yes	236 (61%)	149 (39%)
No	16 (40%)	24 (60%)

Chi-Square 6.810 df 1 P = .009 (Significant) (0.05)

The prevalence was found to be high (61%) among those who shared the same room for sleeping, the difference was statistically significant.

6.4.11 Toilet facility in houses and skin diseases

The prevalence was 64% among children who do not have toilet facility in their Houses compared to those who have (40%).The difference was statistically significant.

Table 13: Toilet facility in houses and Skin diseases

Toilet Facility	Skin Diseases	
	PRESENT	**ABSENT**
Yes	32 (40%)	48 (60%)
No	220 (64%)	125 (36%)

Chi-Square 15.200 df 1 P = .000 (Significant) (0.05)

6.4.12 Source of water and skin diseases

Table 14: Source of water and Skin diseases

Source Of Water	Skin Diseases	
	Present	**Absent**
Corporation Lorry	127(66%)	67 (34%)
Corporation Pipe	112 (53%)	98 (47%)
Hand Pipe	13 (62 %)	8 (38%)

Chi-Square 6.210 df 2 P = .045 (Significant) (0.05)

The prevalence of skin diseases and the source of water for washing, bathing purposes were found to be significant. The prevalence was 66%, 53%, 62% for corporation lorry water, corporation pipe water and hand pipe water respectively.

6.4.13 Mode of disposal of Wastes from home

All mothers used the public dustbin for disposal of wastes from houses.

6.4.14 Daily bathing and Skin diseases

The prevalence of skin diseases among children who bathe daily was 74% where as it was only 54% for those who don't. This was found to be statistically significant (Table 15).

Table 15: Daily bathing and Skin diseases

Bathing	Skin Diseases	
	Present	**Absent**
Daily	173(54%)	146 (46%)
Not Daily	79 (75%)	27 (25%)

Chi-Square 13.579 df 1 P = .000 (Significant) (0.05)

6.4.15 Wearing washed clothes daily and skin diseases

Table 16: Wearing washed clothes daily and Skin diseases

Washed Clothes	Skin Diseases	
	Present	**Absent**
Yes	130 (49%)	133 (51%)
No	122 (75%)	40 (25%)

Chi-Square 27.817 df 1 P = .000 (Significant)
(0.05)

The prevalence of skin diseases and daily washed clothes worn by the children was found to be statistically highly significant. The prevalence was 75% and 49% among those who had worn the daily washed clothes and those who had not respectively.

6.4.16 Hair bath to child

All the mothers had been given hair bath to their child regularly at once a week.

6.4.17 Soap using while taking bath

All the children had been used the soap regularly while taking bath.

6.4.18 Nail cutting to the child and skin diseases

There was no statistical significance between the prevalence of skin diseases and nail clipping to the child.(Table 17)

Table 17: Nail cutting to the child and skin diseases

Cutting The Nails Regularly	Skin Diseases	
	Present	**Absent**
Yes	22 (52%)	20 (48%)
No	230 (60%)	153 (40%)

Chi-Square 0.923 df 1 P = 0.337 (Not significant) (0.05)

6.4.19 Skin diseases in the family and Skin diseases in the child

The prevalence of skin diseases was 20% among those who had the family history of skin diseases, 60% among children without the family history of skin diseases and 55% among those family histories of skin diseases were not known. This relationship was not statistically significant.

Table 18: Skin diseases in the family and Skin diseases in the child

Skin Disease In The Family	Skin Diseases	
	Present	**Absent**
Yes	1 (20%)	4 (80%)
No	215 (61%)	140 (39%)
Don't Know	36 (55%)	29 (45%)

Fisher's Exact test, P = 0 .146 (Not significant)

6.5 STATISTICAL ANALYSIS OF PERSONAL HYGIENE AND SKIN DISEASES

6.5.1 Cleanliness of school dress and skin diseases

The prevalence of skin diseases was 47% among those who were wearing clean school dress whereas it was 64% among those who were wearing unclean school dress and the differences was found to be statistically significant.

Table 19:– Cleanliness of School dress and Skin diseases

School Dress	Skin Diseases	
	Present	**Absent**
Clean	53(47%)	59 (53%)
Unclean	199 (63%)	114 (36%)

Chi-Square 9.032 df 1 P = .003 (Significant) (0.05)

6.5.2 Dandruff and Skin diseases

The Prevalence of skin diseases among children with dandruff was 71% where as it was 50% among children without dandruff. The difference was found to be statistically significant.

Table 20: Personal hygiene - Dandruff and Skin diseases

Dandruff	Skin Diseases	
	Present	**Absent**
Present	133 (71%)	54 (29%)
Absent	119 (50%)	119 (50%)

Chi-Square 1 9.359 df 1 P = .000 (Significant) (0.05)

6.5.3 Nasal discharge and Skin diseases

Table 21: Cleanliness of Nose and Skin diseases

Nose	Skin Diseases	
	Present	**Absent**
Clean	174 (57%)	132 (47%)
Discharge	78 (66%)	41 (34%)

Chi-Square 2.677 df 1 P = .102 (Not significant) (0.05)

There was no statistical significance between the prevalence of skin diseases and nasal discharge among children.

6.5.4 Wax accumulation and Skin diseases

Table 22: Personal hygiene - Ear and Skin diseases

Ear	Skin Diseases	
	Present	**Absent**
Clean	88 (57%)	67 (43%)
Wax accumulation	164 (60%)	106 (40%)

Chi-Square 0.642 df 1 P = 0.423 (Not significant) (0.05)

There was no statistical significance between the prevalence of skin diseases and Wax accumulation among children**.**

6.5.5 Unclean teeth and skin diseases

Children with unclean teeth had the prevalence of 63% where as it was only 47% children with clean teeth. This was statistically significant

Table 23: Personal hygiene – Teeth and Skin diseases

Teeth	Skin Diseases	
	Present	**Absent**
Clean	40 (47%)	46 (53%)
Unclean	212 (63%)	127(37%)

Chi-Square7.299 df 1 P = .007 (Significant) (0.05)

6.5.6 Dental caries and Skin diseases

There was no association between dental caries and the prevalence of skin diseases. This was found to be statistically significant.

Table 24: Personal Hygiene: Dental caries and skin diseases

Dental Caries	Skin Diseases	
	Present	**Absent**
Present	158(61%)	101 (39%)
Absent	94 (57%)	72 (43%)

Chi-Square .803 df 1 P = .370 (Not significant) (0.05)

6.5.7 Personal hygiene – Nails and Skin diseases

Prevalence of skin diseases among children who had unclean nails was 61% where as it was 40% among children with clean nails. This was found to be significant.

Table 25: Personal hygiene – Nails and Skin diseases

Nails	Skin Diseases	
	Present	**Absent**
Clean	18 (41%)	26 (59%)
Unclean	234 (61%)	147 (39%)

Chi-Square 6.873 df 1 P = .009 (Significant) (0.05)

6.5.8 Unpleasant body odour and Skin diseases

Table 26: Unpleasant body odour and Skin diseases

Bad Body Odor	Skin Diseases	
	Present	**Absent**
Present	83 (76%)	27 (24%)
Absent	169(53%)	146 (46%)

Chi-Square 16.059 df 1 P = .000 (Significant) (0.05)

Prevalence of skin diseases among children with bad body odour was 76% without bad odor the prevalence was found to be 54%. The difference was statistically significant.

6.5.9 Barefoot and Skin diseases

Table 27: Barefoot and Skin diseases

Bare Foot	Skin Diseases	
	Present	**Absent**
Yes	70 (70%)	30 (30%)
No	182 (56%)	143 (44%)

Chi-Square 6.210 df 1 P = .013 (Significant) (0.05)

The prevalence of skin diseases among the children those who come to school with bare foot was 70%where as it was 56% among children those who come with slippers.

DISCUSSION

7. DISCUSSION

The pattern of skin diseases differs in different countries and within various regions of a country. Skin diseases in children are very much influenced by climate, external environment, socio economic status and Personal Hygiene .This study was carried out among the children of Government Primary schools in Zone 3 of Chennai, to find out the Prevalence of Common Skin Diseases and the factors associated with skin diseases.

7.1 PREVALENCE OF SKIN DISEASES

Out of 425 study subjects, 252 children had skin diseases and the prevalence was found to be 59.3% (with 95% confidence interval of 54.2% to 63.7%) which was similar to the studies conducted by Ewaldo V Komba et al [(16)] in Dar es Salaam and RA Valia et al [(34)] in Varanasi, Vikas Bhatia [(10)] in Chandigarh (prevalence was 57.3% and 54%, 51% respectively.)

Children having two skin diseases in this study were 4%. Pediculosis capitis was the commonest one which contributed 15%, other diseases were Miliaria rubra (14%),Impetigo 12.2%, Scabies 7.1%, Pityriasis Versicolor 4.5%, Insect bite allergy 4%, Pityriasis alba 4%, Eczema1%, Molluscum contagiosum1%, Common warts1%, Insect bites allergy1%, Tinea corporis1%, Tinea capitis 0.2% and Tinea pedis 0.2%.

Common skin diseases in children in developing countries were extensively and critically reviewed by World Health Organization [(2)]. The diseases were pyoderma, Ectoparasitoses, Superficial mycoses, Viral disorders, and dermatitis.

Kaliaperumal Karthikeyan et al [5] reported infestations and infections were the most common group of disorders (54.4%) in their study on Pattern of Pediatric Dermatoses in a Referral Center in South India. Among the disorders Pyoderma and scabies were the most common bacterial and parasitic infections, respectively. In this study also pyoderma and scabies were the common bacterial and parasitic infections respectively.

Pediculosis capitis showed highest prevalence in this study which was similar to the studies by Libu et al [8]and Vikas Bhatia et al [10], but the same disease showed low prevalence in a study conducted by Rao et al [29] in Mangalore.

Miliaria was the second most common disease in this study with the prevalence of 14%.A study done by Sabyasachi Banerjee et al [25] also found miliaria as the second most common disease among the six most common skin diseases in their study.

In this study, the prevalence of skin diseases like Pediculosis capitis, Pyoderma, Scabies, Fungal infections (in descending order) were almost similar to the study by Negi et al [36] in Uttarpradesh. On the other hand the prevalence of Pityriasis Alba and Eczema were high in their study compared to this study.

The prevalence of scabies in this study (8%) was similar to the study by SB Rotti et al [6] in Karnataka where it was 7%.

In this study the prevalence of Tinea Versicolor was 4.5% and tinea capitis was 0.2% similar to Sharma NL et al [35] study in Himachal Pradesh. The reason for the low prevalence could be due to lack of rain. Another possible explanation for the

low prevalence of dermatophytosis may be due to the fact that the study only looked at those with detectable signs of fungal infection.

Ghosh et al [30] observed a low prevalence of (4%) insect bite reactions in their study. In this study also the prevalence of insect bite reactions was 4%.

In this study Viral Warts and Molluscum Contagiosum were the common viral infections similar to the study done by Patel JK et al [13].

7.2 SOCIO DEMOGRAPHIC CHARACTERISTICS AND SKIN DISEASES

The age of children was between 5 – 11 years; mean age was 8 years .The prevalence of skin diseases was highest in age group of 7-9 years (61%).However there was no significant association seen between the age and prevalence of skin diseases. This was similar to a study conducted by Libu et al [8] among Primary School Children in Calicut, Kerala in 2006 where the prevalence was high among the children above 7 years.

In this study male children was 51% and female children 49% among them Hindus were 50%, Muslims 45% and Christians 5%.The prevalence of skin diseases was high among female children and according to the religion the prevalence was high among Muslim children however there was no significant difference between sex, religion, and the prevalence of skin diseases similar to Ewaldo et al [16] study.

There was an inverse relationship between the parent's education and the prevalence of skin diseases. Prevalence of skin diseases were 94% among the children of illiterate mothers where as it was only 26% among the children of mothers with higher education and this statistically significant similar to Khalifa KA et al [26] .

In this study the high prevalence of skin diseases were seen among children with lower middle class than upper lower socio economic status. The reason might be due to unequal proportion of study subjects between these two socio economic groups. Inanir I et al [30] reported the prevalence of skin diseases were significantly high among children with poor socio economic status similarly in this study also high prevalence were seen among children with lower socio economic status.

RA Valia et al [34] in Varanasi reported the prevalence of skin diseases among school children was 53.6% this high prevalence is probably because most students examined were in Government schools and from the lower socioeconomic groups, similar to the present study.

In this study the prevalence was 69% among children having more than 4 family members and where as it was 49% in children < than 4 family members. This was found to be statistically significant. The prevalence of skin diseases was 62% among overcrowded houses and 27% among non overcrowded houses. The difference was found to be highly statistically significant similar to Sharma et al [23] study among urban school children where overcrowding and poor standard of hygiene of the children are responsible for the high degree of infestations among children.

Prevalence of skin diseases was 60% among the children living in semi pucca house and 51% among the children living in pucca house. There was no statistical significance between the type of house and skin diseases. The prevalence was high among those sharing the same room for sleeping than those who do not, this was found to be statistically significant similar to Sharma et al [3].

In this study, the prevalence of skin disease was 64% among the children who do not have toilet facility in their houses compared to those who have (40%).This difference was statistically significant. No studies in India have documented this kind of association. Hence comments could not be given.

There was a significant association between the prevalence of skin diseases and the factors like not taking daily bath and not wearing daily washed clothes. Similarly, Amin TT et al [(11)] also found a significant association between infrequent washing of clothes and infrequent bathing with soap in their study.

All the mothers have been given hair bath with shampoo to their child regularly at once a week interval there was no relationship between the hair bath to the child and skin diseases which was similar to Majid Zarrin et al [(17).]

There was no significant association between the factors like regular cutting of finger nails, family history of skin diseases and the prevalence of skin diseases in this study subjects.

Regarding personal hygiene status among the school children, there was a significant association between the prevalence of skin diseases and the factors like unclean school dress, dandruff in the hair, unclean nails, unclean teeth, Bad body odor and bare foot .Amin TT et al [(33)] also noted association between the personal hygiene and the prevalence of skin diseases in their study population.

Poor socio-economic status, high illiteracy rate, poor hygienic and sanitary conditions, contributed to the high prevalence of skin diseases in the study population of Vikas [(10)] et al.

In developing countries low socioeconomic status, overcrowding, and poor standards of hygiene are the important factors accounting for distribution of skin diseases, particularly transmissible ones [29]

Amin TT et al [33] found that the Socio-demographic characteristics and hygiene as the significant factors in transmission of skin diseases similarly in this study also socio demographic characteristics and personal hygiene played a vital role.

Overcrowding, Poor housing conditions, Lack of awareness of personal hygiene were accounted for the high prevalence of contagious diseases in their study population reported by Sharma NL et al [35] similar to the present study.

SUMMARY

8. SUMMARY

This study was carried out among the Primary School Children in Government schools of Pulianthope Zone in Chennai to find out the Prevalence of Common Skin Diseases and the factors associated with skin diseases.

The study revealed the following findings

- The prevalence of skin diseases was found to be 59.3% (with 95% confidence interval of 54.2% to 63.7%).The prevalence of individual skin diseases were, Pediculosis capitis15%, Miliaria rubra14%,Impetigo 12%, Scabies7.1%, Pityriasis versicolor 6%, Pityriasis Alba 4%, Eczema1%, Molluscum contagiosum1%, Common warts1%, Insect bites allergy1%, Tinea corporis1%, Tinea capitis 0.2% and Tinea pedis 0.2%.

- Among the study population, 18% were in the age group of 5-6 years, 40% were 7-8 years and 42% were 9 – 11 years. Male children contributed 51% and female children were 49%.Among the religious status, 50% were Hindus, 45% were Muslims, 55 were Christians. Regarding the parent's educational status, 56% of fathers completed high school education and 52% of mothers completed only primary school education.

- Overcrowding was seen among 92% of children house. Majority of them used corporation lorry water for washing and bathing purposes.81% were not having toilet facility in their house. Only 75% children had taken bath daily. Only 62% children had worn washed clothes daily. Only 10% mothers had the regular habit of cutting the nails of their children.

- Regarding the personal hygiene of children, 74% were wearing unclean school dress, 28% had nasal discharge due to respiratory tract infection, 64% had wax accumulation in their ears, 80% had unclean teeth, dental caries was seen among 61% children.10% children had clean trimmed nails. Bad body odor was present in 26% and 24% children used to come to school by barefoot.

- Skin diseases were high among the age group of 7-8 years. There was significant association between Parents educational status, Socio economic status, more than 4 family members in a house, overcrowding, all family members sharing the same room for sleeping, toilet facility in the house, not taking bath daily, not wearing washed clothes daily and the skin diseases.

- Regarding personal hygiene, unclean school dress, dandruff in the hair, unclean teeth, dental caries, unclean nails, bad body odour and barefoot walking had statistical significant association with the skin diseases.

- There was no statistical significant association between sexes, religion, type of house, water used for washing and bathing purposes, skin diseases in the family members and the prevalence of skin diseases among children.

LIMITATIONS

9. LIMITATIONS

1. The study has been carried out among urban Government primary school children and not from the private schools. Only lower strata of children going to the Government schools hence the results cannot be generalized to all the Primary school children.

2. Study has been done at one point of time; those who did not participate in the study might have had a different pattern of skin diseases, socio - demographic characteristics and hygiene habits.

3. Further studies can be done with focus on individual skin diseases.

RECOMMENDATIONS

10. RECOMMENDATIONS

1. This study estimated that 59% of children had skin diseases. Even after the successful implementation of school health programmes, the prevalence of skin diseases were still high among the children. This may be due to the minimal importance given to the skin diseases. Hence, adequate attention should be given.

2. In school health services a minimum of 5 minutes should be spent to each child for skin examination in sunlight after removal of clothes.

3. Parents and teachers are not giving much importance to skin diseases because they thought that skin diseases are benign and it will resolve in the course of time. Regular health education should be given to both teachers and parents regarding common skin diseases among the children.

4. The importance of maintenance of personal hygiene should be taught to each child by the teachers as well as their parents.

5. Most of the children's house does not have toilet facility. They should be advised to use sanitary latrine (Public latrine) instead of open air defecation.

6. About 24% of children were barefoot walkers which is quite high. Hence health education regarding the hazards of the barefoot walking should be given and the habit should be discouraged.

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ANNEXURES

ANNEXURE I

INFORMATION SHEET

Title of the Dissertation:

"A Cross-Sectional Study On The Prevalence Of Common Skin Diseases Among Primary School Children In Government Schools Of Pulianthope Zone, Chennai, 2011"

The purpose of the study is to find out the Prevalence of Common skin diseases and the various factors associated with skin diseases among the Primary school children in Government schools of Pulianthope Zone, Chennai.

Skin diseases are common health problem among school going children. The causes of skin diseases are hot and humid climate, poor hygiene and poor access to water, household overcrowding etc. Early diagnosis and prompt treatment of skin diseases can decrease their complications. Improvement of Personal hygiene not only reduces the Skin diseases but also reduces many health problems.

We request you to permit your son/daughter to participate in the study.

The privacy of your son/daughter in the research will be maintained throughout the study. In the event of any publication or presentation resulting from the research, no personally identifiable information will be shared.

Taking part in this study is voluntary. You are free to decide whether to allow your son/daughter to participate in this study or to withdraw at any time; your decision will not result in any loss of benefits to which they are otherwise entitled.

The results of this study may be intimated to you at the end of the study period or during the study if anything is found abnormal which may aid in the management or treatment.

தகவல் தாள்

சென்னை புளியந்தோப்பு பகுதியில் அரசு தொடக்கப் பள்ளிகளில் பயிலும் மாணவர்களிடையே நிலவும் தோல் வியாதிகள் பற்றியயோர் ஆய்வு

சென்னை புளியந்தோப்பு பகுதியில் அரசு தொடக்கப் பள்ளிகளில் பயிலும் மாணவர்களிடையே நிலவும் தோல் வியாதிகள் மற்றும் அதற்கான காரணங்களை கண்டறிவதே இந்த ஆராய்ச்சியின் நோக்கமாகும்.

தோல் வியாதிகள் ஆரம்ப பள்ளி மாணவர்களிடையே அதிகமாக காணப்படுகின்றன. சுயசுத்தமின்மை, குடிநீர் பற்றாக்குறை, இட நெருக்கடி, தோல் வியாதிகள் பற்றிய அறியாமை போன்ற காரணங்களால் இவை ஏற்படுகின்றன. இக்காரணங்களை தடுப்பதன் மூலம் குழந்தைகளை தோல் வியாதிகளிலிருந்து பாதுகாக்க முடியும்.

தங்கள் மகன்/மகள் இந்த ஆராய்ச்சியில் பங்கேற்க நாங்கள் விரும்புகிறோம்.

இந்த ஆராய்ச்சியின் முடிவுகளை அல்லது கருத்துகளை வெளியிடும்போதோ அல்லது ஆராய்ச்சியின்போதோ தங்களது அல்லது தங்கள் மகன் / மகள் பெயரையோ, அடையாளங்களையோ வெளியிடமாட்டோம் என்பதை தெரிவித்துக் கொள்கிறோம்.

இந்த ஆராய்ச்சியில் நீங்களும் உங்கள் மகன் / மகள் பங்கேற்பதும் உங்களுடைய விருப்பத்தின் பெயரில் தான் இருக்கிறது. மேலும் நீங்கள் எந்நேரமும் இந்த ஆராய்ச்சியிலிருந்து பின் வாங்கலாம் என்பதையும் தெரிவித்து கொள்கிறோம்.

இந்த ஆராய்ச்சியின் முடிவுகளை ஆராய்ச்சியின்போது அல்லது ஆராய்ச்சியின் முடிவின் போது தங்களுக்கு அறிவிக்கப்படும் என்பதையும் தெரிவித்துக் கொள்கிறோம்.

INFORMED CONSENT FORM

"A Cross-Sectional Study On The Prevalence Of Common Skin Diseases Among Primary School Children In Government Schools Of Pulianthope Zone, Chennai, 2011"

Name of the Participant: Age/Sex

Name of the Participant's Parent: Age/Sex:

Date:

(1) I have been explained in detail about the study and its procedure. I confirm that I had completely understood the study and have had the opportunity to ask questions.

(2) I understand that my son/daughter's participation in the study is voluntary and that my son/daughter is free to withdraw at any time, without giving any reason, without their medical care or legal rights being affected.

(3) I understand that the principal investigator, others working on the investigator's behalf, the Ethics Committee and the regulatory authorities will not need my permission to look at my son/daughter's health records both in respect of the current study and any further research that may be conducted in relation to it, even if they withdraw from the trial. I agree to this access. However I understand that my identity or my son/daughter's identity will not be revealed in any information released to third parties or published.

(4) I agree not to restrict the use of any data or results that arise from this study provided such a use is only for scientific purpose(s).

(5) I agree to my son/daughter taking part in the above study.

_____ _____

Name of the Participant's Parent Signature or thumb impression of Participant's Parents

_____ _____

Name of the investigator Signature of the investigator

Place: Date

ஒப்புதல் படிவம்

சென்னை புளியந்தோப்பு பகுதியில் அரசு தொடக்கப் பள்ளிகளில் பயிலும் மாணவர்களிடையே நிலவும் தோல் வியாதிகள் பற்றிய ஓர் ஆய்வு

பங்கேற்பவர் பெயர் : வயது / பாலினம் :

பங்கேற்பவரின் பெற்றோர்
பெயர் : வயது / பாலினம் :
ஆராய்ச்சி சேர்க்கை எண்: தேதி:

இந்த ஆராய்ச்சியின் விவரங்களை கொண்ட தகவல் தாளைப் பெற்றுக் கொண்டேன்.

இந்த ஆராய்ச்சின் விவரங்களும் அதன் நோக்கங்களும் முழுமையாக எனக்கு தெளிவாக விளக்கப்பட்டது.

எனக்கு விளக்கப்பட்ட விஷயங்களை புரிந்துகொண்டு எனது சம்மதத்தை தெரிவிக்கிறேன்.

இந்த ஆராய்ச்சியில் பிறரின் நிர்பந்தமின்றி என் சொந்த விருப்பத்தின்பேரில் தான் என் மகன் / மகள் பங்கு பெறுகிறார்கள். இந்த ஆராய்ச்சியில் இருந்து எனது மகன்/மகள் எந்நேரமும் பின்வாங்கலாம் என்பதையும் அதனால் எந்த பாதிப்பும் ஏற்படாது என்பதையும் நான் புரிந்துகொண்டேன்.

ஆராய்ச்சியாளர் மற்றும் வேரைச் சார்ந்தவர்களோ, நெறிமுறைக்குழு உறுப்பினர்களோ எனது மகன்/மகள் இந்த ஆராய்ச்சியில் இருந்து விலகினாலும் என்னுடைய அனுமதியின்றி அவர்களது உடல் நிலை குறித்த தகவல்கள் இந்த ஆராய்ச்சிக்கோ இது தொடர்பான வேறு ஆராய்ச்சிக்கோ பயன்படுத்திக் கொள்ள முடியும் என்று புரிந்து கொண்டு சம்மதம் அளிக்கிறேன். ஆனாலும் என்னுடைய மகன் / மகள் அடையாளம் வெளியிடப் படமாட்டாது என்று புரிந்து கொள்கிறேன்.

இந்த ஆராய்ச்சியின் தகவல்களையும் முடிவுகளையும் அறிவியல் நோக்கத்திற்காக பயன்படுத்துவதற்கு நான் அனுமதிக்கிறேன். எனது மகன் / மகள் இந்த ஆராய்ச்சியில் பங்கு பெற சம்மதிக்கிறேன்.

பங்கேற்பவரின் பெற்றோர் பெயர் பங்கேற்பவரின் பெற்றோர் கையொப்பம் (அல்லது) கட்டைவிரல் ரேகை

ஆய்வாளர் பெயர் ஆய்வாளரின் கையொப்பம்
இடம்: தேதி:

ANNEXURE II

QUESTIONNAIRE

PART I: General Details of the Subject from the School Records:

1. Name of the child: School:
2. Age :
3. Sex :
4. Religion : 1.Hindu 2.Christian 3.Muslim 4.Others
5. Standard
6. Address :
7. Name of respondent :
8. Relation to the subject:
9. Fathers education :
10. Mothers education :
11. Fathers occupation :
12. Mothers occupation :
13. Total income of the family:
14. Total members of the family:
15. Type of house: 1. Kutcha 2. Semipucca 3.pucca 4. Others
16. How many living rooms do you have in your house?

    1. One room 2. Two rooms 3.More than two rooms
17. Are you all sharing the same room for sleeping? 1. Yes 2.No
18. What is your main Source of water for washing, bathing purposes?

    1. Corporation lorry water 2.Corporation pipe water 3. Hand pipe 4. Others
19. Do you have toilet facility in your house? 1. Yes 2.No

20. How do you dispose the Wastes from your home?

1. Public dustbin 2.throwing discriminately

21. Do you give bath to your child daily? 1. Yes 2. No

23. Do you use soap regularly to give bath to your child?

1. Yes 2. No 3. Not all the time

24. Does your child wear washed clothes daily? 1. Yes 2. No

25. Do you give hair bath to your child at least once a week?

1. Yes 2. No

26. Do you cut the nails to your child regularly at once a week?

1. Yes 2. No

27. Does any of your members in the family having any skin disease?

1. Yes 2. No 3. Don t know

PART II Personal Hygiene of the Child:

1. School dress	1.Clean	2.Unclean
2. Hair	1.Dandruff present	2. Dandruff absent
3. Nose	1.Clean	2.Nasal discharge (Sputum)
4. Ear	1.Clean	2. Wax accumulation
5. Teeth	1.Clean	2.Unclean
6. Dental caries	1.Present	2.Absent
7. Nails	1. Trimmed clean nails	2. Untrimmed dirt nails
8. Unpleasant body odour	1.yes	2.No
9. Barefoot	1.yes	2.No

PART III: Examination of Skin

		PRESENT	ABSENT
1.	Impetigo		
2.	Impetigo contagiosa		
3.	Folliculitis		
4.	Ulcer		
5.	Eczema		
6.	Pityriasis alba		
7.	Tinea Versicolor		
8.	Tinea capitis		
9.	Tinea faciei/ Corporis		
10.	Tinea Pedis		
11.	Molluscum contagiosum		
12.	Common warts		
13.	Scabies		
14.	Pediculosis capitis		
15.	Miliria		
16.	Vitiligo		
17.	.Insect bite allergy		

வினாப்பட்டி

பகுதி-1

1. குழந்தையின் பெயர் :

2. பள்ளி :

3. வயது :

4. பாலினம் : ஆண் / பெண்

5. வகுப்பு :

6. மதம் : 1] இந்து 2] கிறிஸ்டியன் 3] முஸ்லீம்

7. வீட்டு முகவரி :
[பள்ளி குறிப்புகளிலிருந்து]

8. தந்தையின் கல்வித்தகுதி :

9. தாயின் கல்வித்தகுதி :

10. தந்தையின் தொழில் :

11. தாயின் தொழில் :

12. குடும்ப மொத்த வருமானம் :

13. குடும்ப நபர்களின் எண்ணிக்கை :

14. வீட்டின் அமைப்பு :

15. வீட்டில் உள்ள பயன்படுத்தும் அறைகளின் எண்ணிக்கை :
1] ஒன்று 2] இரண்டு 3] இரண்டிற்கு மேல்

16. குடும்பத்தில் உள்ள அனைவரும் ஒரே அறையில் தூங்கும் பழக்கம் உண்டா?
1] ஆம் 2] இல்லை

17. குளிப்பதற்கும், துணி துவைப்பதற்கும், எந்த தண்ணீரை பயன்படுத்துகிறீர்கள்.
1] மாநகராட்சி லாரி தண்ணீர் 2] மாநகராட்சி குழாய் தண்ணீர்
3] வீட்டு குழாய் தண்ணீர் 4] இதர

18. தங்கள் வீட்டில் கழிவறை தனியாக உள்ளதா?
1] ஆம் 2] இல்லை

19. வீட்டு குப்பைகளை எவ்வாறு அப்புறப்படுத்துகிறீர்கள்.
1] மாநகராட்சி குப்பை தொட்டி 2] வீட்டை சுற்றி

20. தங்கள் குழந்தையின் குளிக்கும் பழக்கம்.
1] தினமும் 2] தினம் இரண்டு முறை 3] தினமும் இல்லை

21. தங்கள் குழந்தை எப்பொழுது குளிக்கும் போதும் சோப்பினை பயன்படுத்தும் பழக்கம் உண்டா?
1] ஆம் 2] இல்லை

22. தங்கள் குழந்தை தினமும் துவைத்த ஆடையினை அணியும் பழக்கம் உண்டா?
1] ஆம் 2] இல்லை

23. தங்கள் குழந்தைக்கு வாரம் ஒரு முறை நீங்கள் தலை குளிப்பாட்டு பழக்கம் உண்டா?
1] ஆம் 2] இல்லை

24. தங்கள் குழந்தையின் நகங்களை, வாரம் ஒரு முறை வெட்டும் பழக்கம் எப்பொழுதும் உண்டா?
1] ஆம் 2] இல்லை

25. தங்கள் வீட்டில் யாராவது தோல் வியாதியினால் பாதிக்கப்பட்டுள்ளனரா?
1] ஆம் 2] இல்லை 3] தெரியாது

பகுதி-2 : குழந்தையின் தன் சுத்தம் (ஆய்வு)

1. பள்ளி சீருடை : 1] சுத்தம் 2] சுத்தமின்மை
2. தலைமுடி : 1] பொடுகு காணப்படுதல் 2] சுத்தமாக காணப்படுதல்
3. மூக்கு : 1] சுத்தம் 2] சளி காணப்படுதல்
4. காது : 1] சுத்தம் 2] காது அழுக்கு அதிகமாக காணப்படுதல்
5. வாய் : 1] பற்கள் சுத்தம் 2] பற்கள் சுத்தமின்மை
6. வாய் : 1] சொத்தை பல் காணப்படுதல் 2] தூய்மை
7. நகங்கள் : 1] சுத்தம் 2] வெட்டாமல் அழுக்கு காணப்படுதல்
8. உடல் துர்நாற்றம் : 1] ஆம் 2] இல்லை
9. காலணி : 1] ஆம் 2] இல்லை

பகுதி-3 : தோல் ஆய்வு

ANNEXURE III

MODIFIED KUPPUSWAMY'S SOCIO - ECONOMIC STATUS SCALE (URBAN)

A.Education of head of family	Score
Professional Degree	7
Graduate	6
Intermediate/Diploma	5
High school	4
Middle school	3
Primary school	2
Illiterate	1

B. Occupation	Score
Professional	10
Semi-profession	6
Clerical/shop/farm	5
Skilled worker	4
Semiskilled	3
Unskilled	2
Unemployed	1

C. Family income

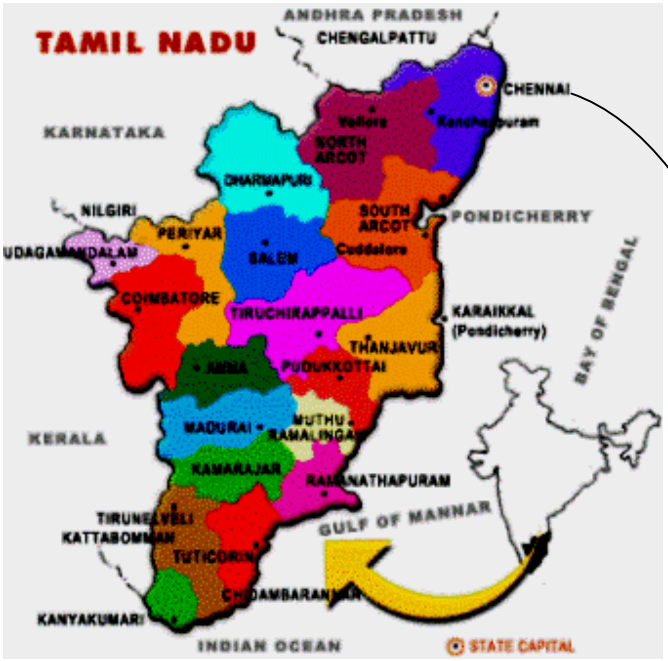
Modified by using conversion factor (multiplied by 10.83)	Score
>21660	12
10830-21659	10
8122-10829	6
5415-8121	4
3249-5414	3
1093-3248	2
<1093	1

SOCIO-ECONOMIC CLASS:

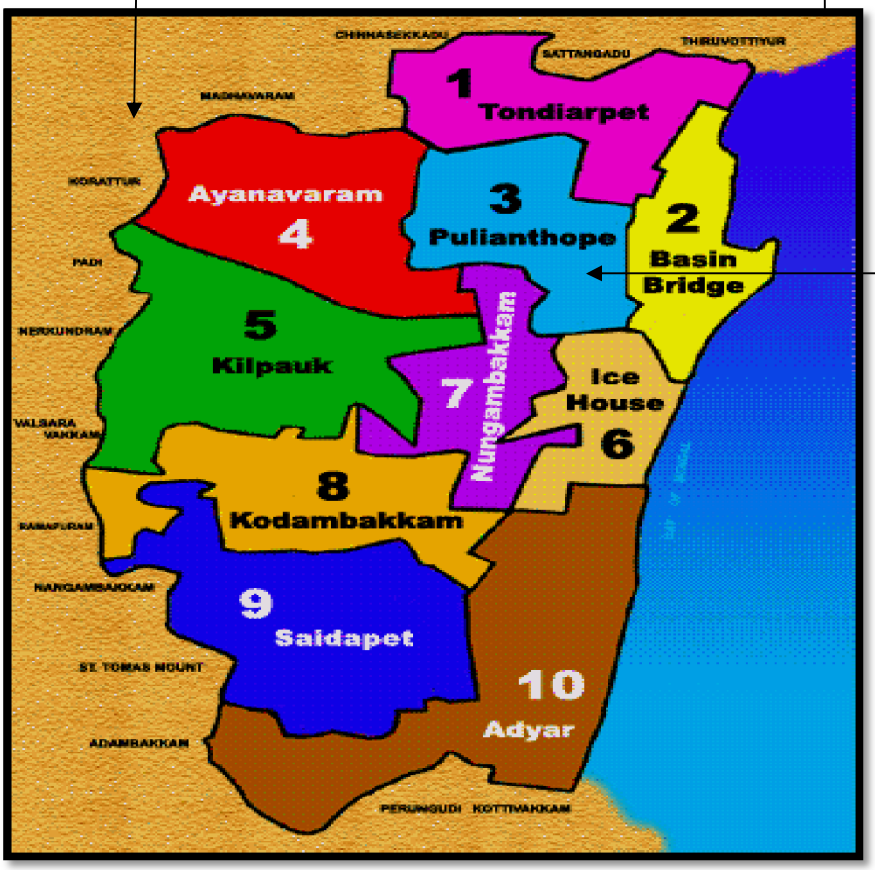
Total Score	Class	Description
26 - 29	I	Upperclass
16 – 25	II	Uppermiddle
11 - 15	III	Lowermiddle
5 – 10	IV	Upperlower
Below 5	V	Lower

ANNEXURE IV

STUDY AREA MAPS



CHENNAI ZONES – MAP



Study Area

ANNEXURE V

LIST OF ZONES IN CHENNAI CORPORATION

ZONE 1	:	Tondiarpet
ZONE 2	:	Basin Bridge
ZONE 3	:	PULIANTHOPE
ZONE 4	:	Ayanavaram
ZONE 5	:	Kilpauk
ZONE 6	:	Ice house
ZONE 7	:	Nungambakkam
ZONE 8	:	Kodambakkam
ZONE 9	:	Saidapet
ZONE 10	:	Adyar

ANNEXURE VI

LIST OF CHENNAI PRIMARY SCHOOLS (C.P.S) IN PULIANTHOPE ZONE, CHENNAI.

1. C.P.S.MAGAZINEPURAM
2. C.P.S.M.G.R.NAGAR
3. C.P.S.2A SCHOOL ROAD
4. C.P.S.MANGALAPURI
5. C.P.S.COOKS ROAD
6. C.P.S.ARUNTHATHIPALAYAM
7. C.P.S.V.O.C.PLAY GROUND
8. C.P.S.STRAHANS ROAD TAMIL
9. C.P.S.STRAHANS ROAD TELUGU
10. C.P.S.T.V.K.NAGAR
11. C.P.S.GURUSAMY NAGAR
12. C.P.S.MOORE MARKET
13. C.P.S.M.K.B.NAGAR
14. C.P.S.GANESAPURAM
15. C.P.S. AMMAYAAMMAL ST
16. C.P.S.SARMA NAGAR
17. C.P.S.UDAYASURIYAN NAGAR
18. C.U.G.P.S.BHOGIPALAYAM
19. C.P.S.T.V.SWAMY

ANNEXURE VII

KEY TO MASTER CHART

Variable	Label	Coding
S.NO	Serial Number	1,2,3, 4,5etc
SCH.NO	School Number	1,2,3,4
AGE	Age of the participant	5/6/7/8/9/10/11 years
SEX	Sex	1=Male 2=Female
STD	Standard	1/2/3/4/5 Std
RELIGION	Religion	1=Hindu 2=Christian 3=Muslim 4=Others
F.EDU	Fathers Education	lliterate, 1 = Primary School, 2 = Middle school, 3 = High school, 4 = higher secondary, degree
M.EDU	Mothers Education	illiterate, 1 = Primary School, 2 = Middle school, 3 = High school, 4 = higher secondary, degree
F.OCCU	Fathers occupation	Coolie/ Autodriver / Tailor / Watchman / No job
M.OCCU	Mothers Occupation	House wife / Coolie
INCOME	Total income of the family	3000/3500/4000/4500/5000/5500/6000/6500/7000/8000 Rupees
MEMBERS	Total members of the family	4/5/6 Members
HOUSE	Type of House	1=Katcha 2 = Semipucca 3=Pucca

ROOMS	Number of living rooms in the family	1=One room 2=Two rooms 3 = More than two rooms
SAME ROOM	All are sharing the same room for sleeping	1=Yes 2=No
WATER	Source of water for washing, bathing purpose	1= Corporation lorry water 2=corporation pipe water 3=Hand pipe
TOILET	Toilet facility in the house	1=Yes 2=No
WASTE	Mode of disposal of wastes	1= Public dustbin 2= throwing in front of house
BATH	Bath to child	1= Daily 2. Not daily
SOAP	Using soap regularly	1=Yes 2=No
WASHED CLOTHES	Wear washed clothes daily	1=Yes 2=No
HAIR BATH	Hair bath in a week	1=Yes 2=No
NAILS	Cutting the nails to the child	1=Yes 2=No
SKIN DIS.IN FAMILY	Skin diseases in the family	1=Yes 2= No 3 = Don t know
DRESS	Cleanliness of the school dress	1 = clean 2 = unclean
HAIR	Dandruff in the hair	1 = Yes 2= No
NOSE	Cleanliness of the nose	1 = Clean 2 = Nasal discharge

EAR	Wax accumulation	1= Present 2 = Absent
TEETH	cleanliness of the teeth	1 = Clean 2 = Unclean
CARIES	dental caries	1 = Present 2 = Absent
NAILS	cleanliness of the nails	1 = Clean trimmed nails 2 = Un clean dirt nails
BODY ODOUR	bad body odour	1 = Present 2 = Absent
BAREFOOT	Bare foot walking to the school	1 = Present 2= Absent
SKIN DISEASE	Examination of skin	0 = No skin Diseases 1 to 18 = Skin disease.

ANNEXURE VIII
MASTER CHART

S.NO	SCH NO	AGE	SEX	STD	RELIGION	F.EDU	M.EDU	F.OCCU	M.OCCU	INCOME	MEMBERS	HOUSE	ROOMS	SAME ROOM	WATER	TOILET	WASTE	BATH	SOAP	WASHED CLOTHES	HAIR BATH	NAILS	SKIN DIS.IN FAMILY	DRESS	HAIR	NOSE	EAR	TEATH	CARIES	NAILS	BODY ODOUR	BAREFOOT	SKIN DISEASE
1	1	5	1	1	1	3	4	coolie	h.w	4000	5	2	2	1	2	1	1	1	1	2	1	2	2	1	1	1	2	1	2	3	2	2	1
2	1	6	1	1	1	5	6	coolie	h.w	4500	4	2	2	1	2	1	1	1	1	2	1	2	2	2	1	1	2	2	1	3	2	2	6
3	1	5	2	1	3	5	7	shop	h.w	4700	4	2	2	1	2	1	1	1	1	2	1	2	2	2	1	1	1	1	2	1	2	2	15
4	1	5	2	1	3	2	5	coolie	h.w	4000	4	2	2	1	2	2	1	3	1	2	1	2	2	2	1	2	1	1	2	3	2	2	0
5	1	6	2	1	3	3	5	butcher	h.w	5000	5	2	3	1	2	2	1	3	1	2	1	2	2	2	1	1	2	1	2	3	2	1	9
6	1	5	2	1	3	7	4	coolie	h.w	4000	5	2	1	1	2	2	1	1	1	2	1	2	2	2	1	2	2	1	2	3	2	2	0
7	1	5	2	1	3	4	5	shop	h.w	3800	4	2	2	1	2	2	1	1	1	2	1	2	2	2	1	1	2	1	1	3	2	2	15
8	1	5	2	1	3	2	4	painter	h.w	5000	5	2	2	1	2	2	1	1	1	2	1	2	2	2	1	2	1	1	2	2	2	2	6
9	1	6	1	1	1	2	7	coolie	h.w	5000	5	2	2	1	2	2	1	3	1	2	1	2	2	1	1	2	2	1	2	3	2	2	0
10	1	5	2	1	3	2	6	coolie	h.w	4500	4	2	2	1	2	2	1	3	1	1	1	2	2	2	1	2	2	2	1	3	2	2	18
11	1	5	1	1	3	2	5	shop	h.w	5000	4	2	2	1	2	2	1	3	1	1	1	2	2	2	1	2	2	1	2	3	2	2	1
12	1	5	1	1	3	4	4	coolie	h.w	4500	5	2	2	2	2	2	1	1	1	2	1	2	2	2	1	2	1	2	1	3	2	2	1
13	1	5	1	1	1	4	6	coolie	h.w	3500	5	2	2	1	2	2	1	1	1	1	1	2	2	1	1	1	1	1	2	3	2	2	15
14	1	5	1	1	1	5	5	coolie	h.w	3600	5	2	2	1	2	2	1	1	1	1	1	2	2	2	1	2	2	1	1	3	2	1	0
15	1	5	2	1	1	5	4	coolie	h.w	4000	5	2	2	1	2	1	1	1	1	1	1	2	2	2	1	1	2	2	1	3	2	2	15
16	1	7	2	1	1	2	7	coolie	h.w	4500	4	2	2	1	2	1	1	1	1	1	1	2	2	1	1	1	1	1	1	3	2	2	0
17	1	7	2	2	3	5	5	tailor	h.w	6000	4	2	2	1	2	1	1	1	1	1	1	2	2	2	1	2	2	2	1	3	2	2	18
18	1	7	2	2	1	6	8	autodriver	coolie	7000	5	2	2	1	2	1	1	1	1	1	1	2	2	2	1	2	2	2	1	3	2	2	13
19	1	7	2	2	1	6	7	coolie	h.w	5000	5	2	2	2	2	2	1	1	1	1	1	2	2	2	1	2	1	1	2	3	2	1	6
20	1	6	2	2	3	6	5	coolie	h.w	4500	5	2	2	1	2	2	1	1	1	1	1	2	2	2	1	2	1	1	2	3	2	2	0
21	1	7	2	2	1	7	4	coolie	h.w	4500	4	2	2	1	2	2	1	1	1	1	1	2	2	2	1	1	1	2	2	3	2	2	0
22	1	7	2	2	3	8	6	coolie	h.w	5000	5	2	2	1	2	2	1	1	1	2	1	2	2	2	1	2	2	2	1	3	2	2	18
23	1	6	1	2	3	8	7	coolie	h.w	5000	4	2	2	1	2	2	1	1	1	2	1	2	2	2	1	2	2	1	2	1	2	2	0
24	1	7	1	2	3	5	8	coolie	h.w	5000	4	2	2	2	2	2	1	1	1	2	1	2	2	1	1	1	1	1	1	3	2	1	15
25	1	7	2	2	3	4	5	coolie	h.w	4500	4	2	2	1	2	2	1	1	1	2	1	2	2	2	1	1	2	2	2	3	2	2	3
26	1	7	2	2	3	8	10	coolie	coolie	6000	4	2	2	1	2	2	1	1	1	2	1	2	2	1	1	1	1	1	1	1	2	2	0
27	1	6	1	2	3	10	8	shop	h.w	6000	4	2	2	1	2	2	1	1	1	2	1	2	2	1	1	2	2	1	2	3	2	2	0
28	1	7	1	2	3	10	7	coolie	coolie	4500	5	2	2	1	2	2	1	1	1	2	1	2	2	1	1	1	1	2	2	2	2	1	0
29	1	7	1	2	3	3	4	coolie	h.w	5000	4	2	2	1	2	2	1	1	1	2	1	2	2	1	1	2	2	1	2	3	2	2	6
30	1	8	1	3	3	4	5	coolie	h.w	5000	5	2	2	1	2	2	1	3	1	2	1	2	2	2	1	2	1	2	1	1	2	2	0
31	1	8	1	3	3	4	8	coolie	h.w	5000	4	2	2	1	2	2	1	3	1	2	1	2	2	2	1	2	2	2	1	3	2	2	15
32	1	8	1	3	3	5	7	autodriver	h.w	6000	5	2	2	1	2	2	1	3	1	2	1	2	2	2	1	2	2	2	1	3	2	2	6
33	1	8	1	3	3	5	6	coolie	h.w	4000	4	2	1	1	2	2	1	3	1	2	1	2	2	2	1	2	2	2	2	3	2	2	1
34	1	7	1	3	1	5	5	coolie	h.w	4500	5	2	2	1	2	2	1	1	1	2	1	2	2	2	1	2	2	2	1	3	2	1	15
35	1	8	1	3	1	5	4	coolie	h.w	4000	4	2	1	1	2	2	1	1	1	2	1	2	2	2	1	2	2	2	2	3	2	2	0
36	1	8	2	3	1	7	8	coolie	h.w	4000	4	2	2	1	2	1	1	1	1	2	1	2	2	2	1	2	2	2	1	3	2	1	13
37	1	8	1	3	3	12	10	coolie	h.w	6000	5	2	2	1	2	1	1	1	1	2	1	2	2	2	1	2	2	2	2	2	2	2	0
38	1	8	1	3	1	6	6	coolie	h.w	4000	5	2	2	1	2	1	1	1	1	2	1	2	2	2	1	2	1	2	2	2	2	2	0
39	1	8	1	3	3	7	4	coolie	h.w	4000	5	2	2	1	2	2	1	1	1	1	1	2	2	2	1	2	2	2	3	2	2	2	5
40	1	8	2	3	3	8	5	coolie	h.w	4500	5	2	2	1	2	2	1	1	1	1	1	2	2	2	1	1	1	2	2	3	2	2	0
41	1	7	1	3	3	8	4	coolie	h.w	4000	5	2	2	1	2	1	1	1	1	2	1	2	2	2	1	1	2	2	1	2	2	2	6
42	1	8	2	3	3	8	7	coolie	h.w	5000	5	2	2	1	2	1	1	3	1	1	1	2	2	2	1	1	1	2	2	2	3	2	0
43	1	8	2	3	3	8	6	coolie	h.w	5000	5	2	2	1	2	2	1	1	1	1	1	2	2	2	2	1	2	1	2	3	2	2	14
44	1	8	2	3	3	6	7	coolie	h.w	3500	5	2	2	1	2	1	1	1	1	1	1	2	2	2	2	1	2	2	1	3	2	2	14
45	1	8	2	3	3	10	8	autodriver	h.w	6000	4	2	2	1	2	2	1	1	1	1	1	2	2	1	1	1	2	2	1	3	2	2	0
46	1	8	2	3	1	6	7	coolie	h.w	3500	4	2	2	1	2	2	1	1	1	1	1	2	2	2	1	2	2	2	2	3	2	2	13
47	1	8	2	3	3	6	5	coolie	h.w	3000	4	2	2	1	2	2	1	1	1	2	1	2	2	2	1	2	2	1	2	1	2	2	0
48	1	8	1	3	3	6	4	coolie	h.w	3500	4	2	2	1	2	2	1	1	1	1	1	2	2	2	1	2	1	2	1	3	2	1	15
49	1	9	1	4	1	9	8	coolie	h.w	4000	4	2	2	1	2	2	1	1	1	1	1	2	2	2	1	2	2	2	1	1	2	2	0
50	1	9	2	4	1	8	5	coolie	h.w	3500	5	2	2	1	2	2	1	3	1	1	1	2	2	2	3	2	2	2	1	2	2	2	13
51	1	9	2	4	3	8	7	coolie	h.w	3000	5	2	2	1	2	2	1	1	1	1	1	2	2	2	1	2	2	2	1	3	2	2	0
52	1	9	2	4	1	8	8	coolie	h.w	3500	5	2	2	1	2	2	1	1	1	1	1	2	3	2	1	1	1	2	2	3	2	2	0
53	1	10	2	4	3	9	6	coolie	h.w	4000	4	2	2	1	2	2	1	1	1	1	1	2	3	2	1	1	1	2	2	3	2	2	0
54	1	9	1	4	1	9	4	coolie	h.w	4500	4	2	2	1	2	2	1	1	1	1	1	2	3	1	1	1	1	1	2	1	2	2	12
55	1	9	1	4	3	9	8	coolie	h.w	5000	5	2	2	1	2	2	1	1	1	1	1	2	3	2	1	2	2	2	1	3	2	2	0
56	1	9	1	4	3	8	8	coolie	coolie	6000	4	2	3	2	2	2	1	1	1	1	1	2	2	2	2	1	1	2	1	3	2	2	0
57	1	9	1	4	3	8	8	coolie	h.w	3500	4	2	2	1	2	2	1	1	1	1	1	2	3	2	2	2	2	2	1	3	2	2	0
58	1	9	1	4	1	8	7	coolie	h.w	4000	4	2	2	1	2	2	1	1	1	1	1	2	2	1	1	1	1	2	1	3	2	2	0
59	1	9	2	4	1	7	4	coolie	h.w	4500	4	2	2	1	2	2	1	1	1	1	1	2	2	2	1	1	1	2	1	2	2	1	0
60	1	9	2	4	3	8	7	coolie	h.w	4500	4	2	2	1	2	2	1	1	1	1	1	2	2	2	2	2	2	2	1	3	2	1	13
61	1	10	2	4	1	7	6	coolie	h.w	5000	4	2	2	1	2	2	1	1	1	1	1	2	2	2	1	1	2	1	1	3	2	2	0

S.NO	SCH NO	AGE	SEX	STD	RELIGION	F.EDU	M.EDU	F.OCCU	M.OCCU	INCOME	MEMBERS	HOUSE	ROOMS	SAME ROOM	WATER	TOILET	WASTE	BATH	SOAP	WASHED CLOTHES	HAIR BATH	NAILS	SKIN DIS.IN FAMILY	DRESS	HAIR	NOSE	EAR	TEATH	CARIES	NAILS	BODY ODOUR	BAREFOOT	SKIN DISEASE
62	1	9	2	4	3	7	4	coolie	h.w	5500	4	2	2	1	2	2	1	1	1	1	1	2	2	2	1	2	1	1	2	3	2	2	0
63	1	9	2	4	3	7	5	autodriver	h.w	6000	4	2	2	1	2	2	1	1	1	2	1	2	2	2	1	2	1	2	1	3	2	1	0
64	1	9	2	4	3	5	6	coolie	coolie	6000	4	2	2	1	2	2	1	1	1	1	1	2	2	2	1	1	1	2	1	2	2	2	13
65	1	9	2	4	3	5	4	coolie	h.w	4000	4	2	2	1	2	2	1	1	1	1	1	2	2	2	1	1	2	2	1	3	2	2	0
66	1	10	1	5	3	5	5	coolie	h.w	4500	4	2	2	1	2	2	1	1	1	1	1	2	2	2	1	1	1	1	2	1	2	2	0
67	1	10	1	5	3	5	7	coolie	h.w	5000	5	2	2	1	2	2	1	1	1	1	1	2	2	1	1	2	2	2	1	1	2	2	0
68	1	10	2	5	1	5	3	coolie	h.w	4500	5	2	2	1	2	2	1	1	1	1	1	2	2	2	1	2	2	2	2	3	2	2	1
69	1	10	2	5	3	4	3	coolie	h.w	4000	5	2	2	1	2	2	1	1	1	1	1	2	2	2	1	2	2	1	1	3	2	2	0
70	1	10	2	5	3	4	5	coolie	h.w	5000	5	2	2	2	2	2	1	1	1	1	1	2	2	2	1	2	2	2	1	3	2	2	15
71	1	10	2	5	1	3	3	coolie	h.w	4000	4	2	3	2	2	2	1	1	1	1	1	2	2	2	1	2	2	2	1	1	2	2	0
72	1	10	2	5	3	3	3	coolie	h.w	3500	4	2	2	1	2	2	1	1	1	1	1	2	2	2	1	1	2	2	1	2	2	2	0
73	1	10	2	5	3	8	7	coolie	h.w	4500	4	2	2	1	2	2	1	3	1	1	1	2	3	2	1	1	2	2	1	3	2	1	0
74	1	11	2	5	3	8	5	coolie	h.w	4000	5	2	2	1	2	2	1	1	1	1	1	2	3	2	1	1	2	2	2	3	2	2	13
75	1	10	2	5	3	8	6	coolie	h.w	4500	5	2	2	1	2	1	1	3	1	1	1	2	3	2	1	1	2	2	1	3	2	2	13
76	1	10	2	5	3	10	9	coolie	h.w	4500	5	2	2	1	2	2	1	3	1	1	1	2	2	2	1	1	2	2	1	3	2	2	0
77	1	10	1	5	3	9	8	coolie	h.w	4500	5	2	2	1	2	1	1	3	1	1	1	2	2	2	1	1	1	1	1	1	2	2	0
78	1	10	1	5	3	8	8	coolie	coolie	6000	5	2	2	1	2	1	1	1	1	2	1	2	2	2	1	1	1	1	2	1	2	2	0
79	1	10	1	5	1	7	5	coolie	h.w	4000	5	2	2	1	2	1	1	1	1	1	1	2	1	2	1	1	1	2	1	3	2	2	0
80	1	10	1	5	1	7	5	coolie	h.w	4500	5	2	2	1	2	1	1	3	1	1	1	2	2	2	1	1	1	2	2	3	2	2	0
81	1	10	1	5	3	8	4	coolie	h.w	3500	5	2	2	1	2	1	1	1	1	1	1	2	2	1	1	1	2	2	1	1	2	2	15
82	1	10	1	5	1	8	6	coolie	h.w	3600	5	2	2	2	2	1	1	1	1	1	1	2	1	1	1	1	2	2	2	1	2	2	0
83	1	11	1	5	3	8	4	coolie	h.w	4000	5	2	2	1	2	1	1	1	1	2	1	2	2	2	1	1	1	2	1	3	2	2	6
84	1	10	1	5	3	8	4	coolie	h.w	4000	5	2	2	2	2	1	1	3	1	1	1	2	2	1	1	1	1	2	2	3	2	2	13
85	1	10	1	5	3	8	5	coolie	h.w	4500	4	3	3	1	2	1	1	3	1	1	1	2	2	1	1	1	1	2	1	3	2	2	0
86	1	10	1	5	3	6	6	coolie	h.w	4500	4	3	3	2	2	1	1	1	1	1	1	2	2	2	1	1	2	2	1	3	2	2	0
87	1	10	1	5	3	6	4	coolie	h.w	4000	4	3	2	1	2	1	1	1	1	1	1	2	2	2	1	1	1	2	2	3	2	2	0
88	1	10	1	5	1	6	4	coolie	h.w	4000	4	3	2	1	2	1	1	1	1	1	1	2	2	2	1	1	1	2	2	3	2	2	15
89	1	10	1	5	1	6	3	coolie	h.w	4000	4	3	2	1	2	1	1	1	1	1	1	2	2	2	1	1	2	2	1	3	2	2	0
90	2	7	1	2	3	6	4	coolie	h.w	4500	4	3	2	1	2	1	1	1	1	1	1	2	2	1	1	2	1	1	2	3	2	2	15
91	2	9	1	4	1	10	8	autodriver	h.w	6500	4	3	3	2	2	1	1	1	1	1	1	2	3	1	3	1	1	1	2	3	2	2	0
92	2	6	1	1	1	8	8	coolie	h.w	4000	4	3	2	1	2	1	1	1	1	1	1	2	3	1	3	2	1	1	2	1	2	2	0
93	2	7	1	2	3	degree	12	autodriver	coolie	7000	5	3	3	2	2	1	1	1	1	1	1	2	2	2	3	2	1	1	2	3	2	2	0
94	2	9	1	4	1	12	10	coolie	h.w	4000	5	3	2	1	2	1	1	1	1	1	1	2	2	1	1	2	1	1	2	3	2	2	0
95	2	8	2	3	1	degree	10	coolie	coolie	6000	5	3	3	2	2	1	1	1	1	1	1	2	2	1	1	1	2	1	2	3	2	2	0
96	2	11	2	5	1	3	2	coolie	h.w	3000	5	3	2	1	2	1	1	1	1	1	1	2	2	1	1	1	2	1	2	3	2	2	6
97	2	10	2	5	1	degree	10	coolie	h.w	5500	4	3	3	2	2	1	1	1	1	1	1	1	2	1	1	1	2	1	2	1	2	2	0
98	2	10	2	5	1	10	9	coolie	h.w	4000	5	3	2	1	2	1	1	1	1	1	1	1	2	1	1	1	1	1	2	3	2	2	0
99	2	10	2	5	1	degree	10	shop	h.w	5000	5	3	2	1	2	1	1	1	1	1	1	1	2	1	1	1	1	1	2	1	2	2	0
100	2	9	2	4	3	degree	10	shop	coolie	5000	5	3	3	2	2	2	1	1	1	1	1	1	2	1	1	1	1	1	2	1	2	2	0
101	2	10	2	5	1	degree	10	autodriver	h.w	6000	5	2	3	2	2	2	1	1	1	1	1	1	2	1	1	1	1	1	1	1	2	2	0
102	3	10	2	5	1	8	4	coolie	h.w	3000	4	2	2	1	2	2	1	1	1	1	1	1	2	1	2	1	1	2	1	1	2	2	15
103	3	11	2	5	3	5	7	coolie	h.w	3000	4	2	2	1	2	2	1	1	1	2	1	2	2	2	2	2	2	2	1	3	2	2	15
104	3	9	2	5	3	8	5	coolie	h.w	4000	5	2	2	1	2	2	1	1	1	2	1	2	2	1	1	1	1	2	1	3	2	2	0
105	3	5	2	1	3	2	iliterate	coolie	h.w	3500	5	2	2	1	2	2	1	1	1	2	1	2	2	2	1	2	1	1	2	3	2	1	0
106	3	6	1	2	3	3	2	coolie	h.w	3000	5	2	2	1	3	2	1	3	1	1	1	2	2	2	1	1	1	1	2	3	2	2	15
107	2	7	1	3	3	4	3	coolie	h.w	3500	4	3	2	1	3	2	1	3	1	2	1	2	2	2	1	2	2	2	2	3	2	2	0
108	3	7	1	3	3	4	3	coolie	h.w	4000	4	2	2	1	3	2	1	3	1	2	1	2	2	2	1	1	2	2	1	3	2	2	1
109	3	8	1	3	3	4	2	coolie	h.w	4000	4	2	2	1	2	1	1	3	1	1	1	2	2	1	1	1	2	2	2	3	2	2	0
110	3	9	1	4	3	3	2	coolie	h.w	3500	4	2	2	1	2	2	1	3	1	2	1	2	2	2	3	1	2	2	1	3	2	1	13
111	3	8	1	4	3	5	4	coolie	h.w	4000	4	2	2	1	2	2	1	3	1	2	1	2	2	1	1	2	1	1	2	1	2	2	0
112	3	8	2	4	3	5	2	coolie	h.w	4000	4	2	2	1	2	2	1	3	1	2	1	2	2	2	1	2	2	2	1	3	2	2	1
113	3	8	2	3	3	7	5	coolie	h.w	4000	5	2	2	1	2	2	1	3	1	2	1	2	2	2	3	2	2	2	1	3	2	2	13
114	3	8	1	4	3	10	8	coolie	h.w	4500	4	2	2	1	2	1	1	3	1	1	1	1	3	2	1	1	2	2	1	3	2	2	0
115	3	8	1	4	3	9	8	coolie	h.w	4000	5	3	2	1	2	2	1	3	1	2	1	1	3	1	1	1	2	2	1	3	2	1	0
116	3	9	1	4	3	8	5	coolie	h.w	4000	4	3	2	1	2	2	1	3	1	2	1	1	2	2	1	1	2	2	2	3	2	2	7
117	3	8	2	3	3	8	6	coolie	h.w	4000	4	3	2	1	3	1	1	3	1	1	1	1	2	2	1	1	2	2	1	3	2	2	0
118	3	8	1	3	3	9	7	coolie	coolie	4500	4	3	3	2	2	1	1	3	1	1	1	2	2	2	1	1	2	2	1	3	2	2	15
119	3	10	2	4	3	6	4	coolie	h.w	4000	4	2	2	2	2	2	1	1	1	1	1	1	2	2	3	2	2	2	1	3	2	2	0
120	3	10	2	5	1	5	4	coolie	h.w	3000	4	2	2	1	2	2	1	3	1	2	1	1	2	2	2	2	1	2	1	1	2	2	14
121	3	10	2	5	3	7	4	coolie	h.w	3500	4	2	2	1	2	2	1	3	1	1	1	1	2	1	2	2	1	2	1	3	2	2	14
122	3	10	2	5	3	6	3	coolie	h.w	3500	5	2	2	1	2	2	1	1	1	2	1	1	2	2	2	2	1	2	1	3	2	2	14
123	3	10	2	5	3	10	8	autodriver	h.w	6000	4	2	2	1	2	2	1	1	1	1	1	1	2	2	1	2	2	2	1	3	2	2	0
124	3	7	1	2	3	10	9	autodriver	h.w	6000	5	2	2	1	2	2	1	3	1	1	1	1	3	1	3	2	1	2	2	3	2	2	0
125	3	6	1	1	3	5	3	coolie	h.w	3500	5	2	2	1	2	2	1	3	1	1	1	2	3	1	3	2	1	2	1	3	2	2	0
126	3	8	1	3	3	8	5	coolie	h.w	4000	5	2	2	1	3	2	1	1	1	1	1	2	2	2	2	2	2	2	2	3	1	2	1
127	3	8	1	3	1	9	6	coolie	coolie	4500	4	2	2	1	3	2	1	1	1	1	1	2	2	2	3	2	2	2	2	3	1	2	1

S.NO	SCH NO	AGE	SEX	STD	RELIGION	F.EDU	M.EDU	F.OCCU	M.OCCU	INCOME	MEMBERS	HOUSE	ROOMS	SAME ROOM	WATER	TOILET	WASTE	BATH	SOAP	WASHED CLOTHES	HAIR BATH	NAILS	SKIN DIS.IN FAMILY	DRESS	HAIR	NOSE	EAR	TEATH	CARIES	NAILS	BODY ODOUR	BAREFOOT	SKIN DISEASE
128	3	9	1	4	3	3	2	coolie	h.w	3500	4	2	2	1	3	2	1	3	1	1	1	2	2	1	3	1	1	1	2	1	2	2	15
129	3	9	1	4	3	3	2	coolie	h.w	4000	5	2	2	1	2	2	1	3	1	1	1	2	2	2	1	1	1	1	1	3	2	2	13
130	3	9	1	4	1	4	iliterate	coolie	h.w	4000	4	2	2	1	2	2	1	3	1	1	1	2	2	2	3	1	1	1	2	3	2	2	7
131	3	9	1	5	3	4	iliterate	coolie	coolie	4000	5	2	2	1	2	2	1	1	1	1	1	1	2	2	1	1	1	1	2	3	1	2	1
132	3	10	1	5	1	4	4	coolie	h.w	4000	5	2	2	1	2	2	1	1	1	1	1	2	2	1	3	1	1	2	2	3	2	2	0
133	3	10	2	5	3	6	iliterate	tailor	h.w	4000	5	2	2	1	3	2	1	1	1	1	1	2	2	1	1	1	1	1	2	3	2	2	15
134	3	9	1	5	3	6	4	coolie	h.w	4000	5	2	2	1	3	2	1	3	1	1	1	2	2	1	3	1	1	2	1	3	2	2	15
135	3	10	1	5	3	5	3	coolie	coolie	5000	5	2	2	1	3	2	1	1	1	1	1	1	2	2	2	1	1	2	1	3	1	1	0
136	4	9	2	3	1	5	2	coolie	coolie	5000	5	2	2	1	3	2	1	1	1	1	1	1	2	2	2	2	2	2	1	3	2	1	15
137	4	9	2	3	1	6	iliterate	coolie	coolie	5000	5	2	2	1	3	2	1	1	1	1	1	1	2	1	1	2	1	2	1	1	2	2	0
138	4	8	2	3	1	6	5	coolie	coolie	5000	6	2	2	1	3	2	1	1	1	1	1	1	2	1	1	2	2	1	2	3	2	2	15
139	4	7	2	2	3	7	3	coolie	h.w	4500	5	2	2	1	2	2	1	3	1	2	1	1	2	1	1	1	2	1	2	1	2	2	0
140	4	7	2	2	3	7	4	coolie	h.w	4000	5	2	2	1	2	2	1	3	1	2	1	2	2	2	2	2	2	1	2	3	2	2	12
141	4	6	2	2	3	8	4	coolie	coolie	5000	6	2	2	2	2	2	1	3	1	2	1	2	2	2	1	2	2	1	2	2	2	2	0
142	4	7	2	2	1	6	5	coolie	h.w	4000	5	2	2	1	2	2	1	1	1	2	1	2	2	2	3	1	2	2	1	3	2	2	13
143	4	7	2	2	1	8	6	coolie	h.w	4000	6	2	2	1	2	2	1	1	1	2	1	2	2	1	1	1	2	2	1	1	2	2	0
144	4	7	2	2	3	5	4	coolie	h.w	4000	6	2	2	1	2	1	1	3	1	2	1	2	2	2	3	1	2	2	1	3	2	1	13
145	4	7	2	2	3	6	4	coolie	h.w	4000	5	2	2	1	2	2	1	1	1	2	1	2	2	2	1	1	1	1	2	3	2	2	0
146	4	7	2	2	3	7	5	coolie	coolie	5000	6	2	2	1	2	2	1	3	1	2	1	2	3	2	1	2	2	2	1	3	2	2	15
147	4	8	2	2	1	8	4	coolie	h.w	4000	5	2	2	1	3	2	1	3	1	2	1	2	2	2	1	1	2	2	2	3	2	1	0
148	4	8	2	2	3	4	2	coolie	coolie	5000	5	2	2	1	2	2	1	1	1	2	1	2	2	2	1	1	2	2	1	3	2	2	13
149	4	8	2	2	3	5	iliterate	coolie	h.w	4000	5	2	2	1	2	2	1	1	1	2	1	1	2	2	1	2	2	2	1	3	2	2	7
150	4	8	2	3	3	6	8	coolie	h.w	4000	6	2	2	1	2	2	1	3	1	2	1	2	2	2	1	1	1	2	2	3	2	2	0
151	4	7	2	3	1	7	8	coolie	h.w	3500	6	2	2	1	2	2	1	1	1	2	1	2	2	2	3	1	2	2	1	3	2	1	1
152	4	8	2	3	1	6	7	coolie	h.w	4000	6	2	2	1	2	2	1	3	1	2	1	2	3	2	1	1	1	2	1	1	2	2	0
153	4	8	2	3	3	7	4	coolie	h.w	4000	5	2	2	1	2	2	1	3	1	2	1	1	3	1	1	1	2	2	1	3	2	2	14
154	4	8	2	3	1	6	3	coolie	h.w	3500	5	2	2	1	2	1	1	3	1	2	1	1	2	2	1	1	2	2	1	3	2	2	0
155	4	7	2	3	1	6	2	coolie	h.w	4000	5	2	2	1	2	2	1	3	1	2	1	1	2	2	1	1	2	2	1	3	2	1	7
156	4	8	2	3	1	5	iliterate	coolie	h.w	4000	5	2	2	1	2	2	1	1	1	2	1	2	2	2	1	1	2	2	1	3	2	1	15
157	4	8	2	3	1	5	iliterate	coolie	h.w	4000	5	2	2	1	2	2	1	1	1	1	1	1	2	2	2	2	2	2	1	3	2	2	13
158	4	8	2	3	3	8	6	coolie	h.w	4000	5	2	2	1	2	2	1	1	1	2	1	2	2	2	1	2	2	2	1	3	2	1	13
159	4	8	2	3	3	7	8	coolie	h.w	4000	4	2	2	1	3	2	1	1	1	1	1	2	2	2	1	1	2	2	1	3	2	1	1
160	4	8	2	3	1	6	8	coolie	h.w	4000	5	2	2	1	3	2	1	1	1	1	1	1	2	2	3	1	2	2	1	3	2	1	1
161	4	8	2	3	1	6	7	coolie	h.w	3000	5	2	2	1	2	2	1	1	1	1	1	1	2	2	1	1	1	2	1	3	2	2	15
162	4	7	2	3	1	4	3	coolie	h.w	3000	5	2	2	1	2	2	1	1	1	1	1	1	2	2	1	1	2	2	1	3	2	2	0
163	4	8	2	3	3	10	8	watchman	h.w	4500	4	2	3	2	2	1	1	1	1	1	1	2	2	2	1	1	1	2	2	3	2	2	0
164	4	8	2	3	3	9	8	autodriver	h.w	6000	5	2	2	1	2	1	1	1	1	1	1	2	2	2	1	1	2	2	1	3	2	2	0
165	4	8	2	3	3	degree	12	autodriver	h.w	6000	4	3	3	2	2	1	1	1	1	1	1	2	2	1	1	1	2	2	2	1	2	1	0
166	4	8	2	3	1	8	6	coolie	h.w	5000	5	3	2	1	2	2	1	1	1	1	1	2	3	2	1	1	2	2	1	3	2	1	1
167	4	8	2	3	1	6	4	coolie	h.w	4000	5	2	2	1	2	2	1	1	1	1	1	2	3	2	2	1	2	2	2	3	2	2	13
168	4	7	2	2	1	7	4	coolie	h.w	4500	6	2	2	1	2	2	1	1	1	2	1	2	2	2	3	1	2	2	1	3	2	2	13
169	4	7	2	2	1	6	4	coolie	h.w	4000	6	3	2	1	2	2	1	2	1	2	1	2	2	2	3	1	2	2	1	3	2	2	13
170	4	6	2	2	1	8	3	coolie	h.w	4500	5	2	2	1	2	2	1	1	1	1	1	2	2	1	2	1	2	2	1	1	2	2	14
171	4	6	1	2	3	9	10	shop	coolie	5000	4	3	3	1	2	1	1	1	1	1	1	2	2	2	1	1	2	2	1	3	2	2	0
172	4	6	1	2	2	10	9	coolie	coolie	6000	5	2	3	1	3	1	1	1	1	1	1	2	2	2	1	1	2	1	2	3	2	2	0
173	4	7	2	3	1	10	8	coolie	h.w	4500	4	2	3	1	2	1	1	1	1	1	1	2	2	2	1	1	2	1	2	3	2	2	0
174	1	8	1	3	3	12	10	coolie	h.w	4000	4	3	3	2	3	1	1	1	1	1	1	2	2	2	1	1	2	1	2	3	2	2	0
175	1	8	2	3	3	8	8	coolie	h.w	4500	4	3	3	1	2	1	1	1	1	1	1	2	2	2	2	2	2	2	1	3	2	1	1
176	3	8	2	3	1	9		coolie	h.w	5000	4	3	3	2	2	1	1	1	1	1	1	2	2	2	1	1	2	2	1	3	2	2	0
177	3	9	2	4	1	9	8	autodriver	h.w	4500	4	2	2	1	2	1	1	1	1	1	1	1	2	1	1	1	2	1	2	2	2	2	0
178	3	10	1	5	3	10	8	autodriver	h.w	5000	4	2	2	1	3	1	1	1	1	1	1	2	2	2	1	1	2	1	2	1	2	2	0
179	3	10	2	5	1	7	6	coolie	h.w	4500	4	2	2	1	2	1	1	1	1	1	1	2	3	1	1	1	2	2	2	3	2	2	0
180	3	9	2	4	1	degree	10	tailor	h.w	5000	4	2	2	1	2	1	1	1	1	1	1	1	3	2	1	1	2	2	1	3	2	2	0
181	3	8	1	3	3	degree	12	autodriver	h.w	5000	4	2	2	1	2	2	1	3	1	2	1	1	3	2	1	1	2	2	1	3	2	2	15
182	3	7	1	3	3	degree	10	autodriver	h.w	4000	5	2	2	1	2	2	1	1	1	1	1	1	2	2	1	1	2	2	1	3	2	1	15
183	3	8	2	4	1	8	6	coolie	h.w	4500	5	2	2	1	2	2	1	3	1	2	1	1	2	2	1	1	2	1	1	3	2	2	0
184	4	7	2	2	1	6	5	coolie	h.w	4000	5	2	2	1	2	2	1	1	1	1	1	1	2	2	1	1	2	2	2	3	2	1	13
185	4	7	2	2	1	9	8	coolie	h.w	4500	5	2	2	1	2	2	1	1	1	1	1	1	2	2	1	1	2	2	1	3	2	1	0
186	4	8	2	2	1	6	5	coolie	h.w	4000	5	2	2	1	2	2	1	1	1	1	1	1	2	2	1	1	2	2	1	3	2	2	13
187	4	8	2	2	1	6	5	coolie	h.w	4500	5	2	2	1	2	2	1	1	1	1	1	1	3	2	1	1	2	2	1	3	2	2	0
188	3	7	2	2	1	10	9	autodriver	h.w	6000	4	2	2	1	2	2	1	1	1	1	1	2	2	2	1	1	2	2	1	3	2	2	15
189	4	7	2	2	1	9	6	coolie	h.w	4000	5	2	2	1	2	2	1	1	1	1	1	2	2	1	1	1	2	2	2	3	2	2	0
190	4	7	2	2	1	7	5	coolie	h.w	4000	5	2	2	1	3	2	1	1	1	1	1	2	2	2	2	1	2	2	2	3	2	1	18
191	4	8	2	2	2	3	iliterate	coolie	h.w	4000	5	2	2	1	3	2	1	3	1	2	1	2	2	2	2	1	2	2	1	3	2	2	13
192	4	8	1	3	1	10	8	coolie	h.w	4500	4	3	2	1	2	1	1	1	1	1	1	2	2	2	1	1	2	2	1	3	2	2	0
193	4	8	2	3	1	2	iliterate	coolie	h.w	4000	4	2	2	1	2	2	1	1	1	1	1	2	2	2	1	1	2	2	1	3	2	2	0

S.NO	SCH NO	AGE	SEX	STD	RELIGION	F.EDU	M.EDU	F.OCCU	M.OCCU	INCOME	MEMBERS	HOUSE	ROOMS	SAME ROOM	WATER	TOILET	WASTE	BATH	SOAP	WASHED CLOTHES	HAIR BATH	NAILS	SKIN DIS.IN FAMILY	DRESS	HAIR	NOSE	EAR	TEATH	CARIES	NAILS	BODY ODOUR	BAREFOOT	SKIN DISEASE
194	4	6	2	1	1	2	3	coolie	h.w	4000	5	2	1	1	2	2	1	1	1	2	1	2	2	2	1	1	2	2	1	3	2	2	14
195	4	5	2	1	1	3	4	coolie	h.w	4500	4	3	2	1	2	2	1	1	1	1	1	2	2	2	2	1	2	2	1	3	2	2	14
196	4	5	2	1	1	4	2	coolie	h.w	4000	5	2	1	1	2	2	1	1	1	1	1	2	2	1	2	1	2	2	1	3	2	1	14
197	4	5	2	1	2	5	3	coolie	coolie	4000	4	2	2	1	2	2	1	1	1	2	1	2	2	2	2	2	2	1	1	3	2	2	0
198	4	6	2	1	1	5	4	coolie	h.w	4000	5	3	1	1	2	2	1	1	1	2	1	2	2	2	1	1	2	2	1	3	2	2	13
199	4	5	2	1	1	5	3	coolie	h.w	4000	5	3	2	1	2	2	1	1	1	1	1	2	2	2	2	1	2	2	1	3	2	1	13
200	4	5	2	1	1	4	2	coolie	h.w	4500	5	2	2	1	1	2	1	1	1	2	1	2	2	2	2	1	1	2	2	3	2	1	15
201	4	5	1	1	3	9	8	painter	h.w	6000	4	2	3	2	1	1	1	1	1	1	1	2	2	2	1	1	2	2	1	3	2	2	0
202	4	5	2	1	1	5	4	coolie	h.w	4000	5	2	2	1	1	2	1	1	1	1	1	2	3	2	2	1	2	2	1	3	2	1	1
203	4	5	2	1	3	6	3	coolie	h.w	4000	6	2	2	1	1	2	1	1	1	2	1	2	3	2	1	1	2	2	1	1	1	1	13
204	4	6	2	1	3	8	7	coolie	h.w	4500	4	2	2	1	1	2	1	1	1	1	1	2	2	2	4	1	2	2	2	1	2	2	0
205	4	5	2	1	3	8	7	coolie	h.w	4000	4	2	2	1	1	2	1	1	1	1	1	2	3	2	1	1	2	2	1	3	2	2	11
206	4	5	2	1	1	8	6	coolie	h.w	4500	4	3	2	1	1	2	1	1	1	1	1	2	2	2	1	1	2	2	1	3	1	1	0
207	4	5	2	1	1	7	9	coolie	coolie	6000	5	3	2	1	1	2	1	1	1	1	1	2	2	1	2	2	2	2	1	3	2	2	0
208	4	6	2	1	2	6	4	coolie	h.w	4000	5	3	2	1	1	2	1	3	1	1	1	2	2	2	2	2	2	1	1	3	2	2	13
209	4	5	2	1	1	8	7	coolie	h.w	4500	4	2	2	2	1	2	1	1	1	1	1	1	2	2	1	1	2	1	1	3	2	2	0
210	4	5	2	1	1	9	8	coolie	h.w	4500	4	2	2	1	1	2	1	1	1	1	1	1	2	2	2	1	2	2	1	3	2	2	0
211	4	5	2	1	1	6	4	coolie	h.w	4000	5	3	2	1	1	2	1	1	1	2	1	2	2	1	2	1	1	2	1	3	2	2	11
212	4	6	1	1	3	8	7	coolie	h.w	4000	4	3	2	1	1	1	1	1	1	1	1	1	2	2	1	2	2	2	2	3	2	2	0
213	3	6	2	1	1	5	4	coolie	h.w	4000	5	2	2	2	1	2	1	1	1	1	1	2	3	2	1	1	2	2	2	3	2	1	6
214	3	7	1	3	2	8	7	autodriver	h.w	6000	4	2	3	2	1	1	1	1	1	1	1	2	2	2	1	1	2	2	1	3	2	2	0
215	3	7	1	3	1	8	7	shop	h.w	4500	4	2	2	1	1	2	1	1	1	1	1	2	2	2	1	1	2	2	1	3	2	2	0
216	4	5	1	1	3	5	4	coolie	h.w	4000	5	2	2	1	1	2	1	1	1	2	1	2	2	2	1	1	2	2	2	1	2	2	11
217	4	5	1	1	3	10	8	autodriver	h.w	6000	5	2	2	1	1	2	1	1	1	2	1	2	2	2	3	1	1	1	1	2	2	1	0
218	4	5	1	1	3	5	4	coolie	h.w	4000	5	2	2	1	1	2	1	1	1	2	1	2	2	2	2	1	2	2	2	3	2	1	13
219	4	7	1	2	3	4	4	coolie	h.w	3500	5	2	2	1	1	2	1	1	1	1	1	2	2	1	3	1	1	1	2	3	2	2	1
220	4	7	1	2	1	5	3	coolie	h.w	4000	6	2	2	1	1	2	1	1	1	1	1	2	2	1	3	1	1	2	1	3	2	2	1
221	4	7	1	2	3	6	2	coolie	h.w	3500	5	2	2	1	1	2	1	1	1	1	1	2	2	1	3	1	2	2	1	3	2	2	7
221	4	7	1	2	1	6	4	coolie	h.w	4000	6	2	2	1	1	2	1	3	1	2	1	2	2	2	3	2	2	2	1	3	1	2	1
223	4	7	1	2	3	6	5	coolie	h.w	4000	5	2	2	1	1	2	1	1	1	1	1	2	2	1	3	1	2	1	1	3	2	2	15
224	4	7	1	2	3	illiterate	illiterate	coolie	h.w	4000	5	2	2	2	1	2	1	3	1	2	1	2	2	1	1	2	2	2	1	3	1	2	1
225	4	8	1	3	1	illiterate	iliterate	coolie	h.w	4000	5	2	2	1	1	2	1	3	1	1	1	2	3	2	3	2	2	2	1	3	1	2	7,15
226	4	8	1	3	3	3	iliterate	coolie	h.w	4000	5	2	2	1	1	2	1	1	1	1	1	2	2	1	1	2	2	2	2	3	1	2	1,7
227	4	8	1	3	2	4	2	coolie	h.w	3500	5	2	2	1	1	2	1	1	1	1	1	2	2	1	2	1	2	2	2	3	1	1	1,7
228	4	9	1	3	1	5	4	coolie	h.w	4000	5	2	2	1	1	2	1	1	1	1	1	2	3	2	3	2	2	2	1	3	1	1	1,15
229	4	9	1	3	3	3	iliterate	coolie	h.w	4000	5	2	2	1	1	2	1	1	1	1	1	2	3	2	3	1	2	2	1	3	1	2	1,15
230	4	8	1	3	1	2	iliterate	coolie	h.w	4000	5	2	2	1	1	2	1	1	1	1	1	2	3	2	3	1	2	2	1	3	1	2	15
231	4	9	1	3	1	6	5	coolie	h.w	4000	5	2	2	1	1	2	1	3	1	2	1	2	2	2	3	2	2	2	1	3	1	1	15
232	4	9	1	3	1	5	4	coolie	h.w	3500	5	2	1	1	1	2	1	3	1	2	1	2	2	1	3	2	2	2	1	3	1	2	8
233	4	9	1	3	3	illiterate	2	coolie	h.w	4000	5	2	2	1	1	2	1	1	1	1	1	2	2	2	3	2	2	2	1	3	1	2	1,8
234	4	9	1	3	2	illiterate	2	coolie	h.w	3500	5	2	1	1	1	2	1	3	1	2	1	2	2	2	3	1	1	2	2	3	1	2	1,15
235	4	8	1	3	3	6	4	coolie	h.w	4000	5	2	1	1	1	2	1	1	1	2	1	2	2	2	3	1	2	2	1	3	1	2	15
236	4	8	1	3	3	7	5	coolie	h.w	4000	5	2	2	1	1	2	1	1	1	1	1	2	2	2	3	1	2	2	2	3	1	2	1
237	4	8	1	3	3	6	5	coolie	h.w	3000	5	2	2	1	1	2	1	1	1	1	1	2	2	2	3	1	2	2	1	3	1	1	15
238	4	8	1	3	1	6	5	coolie	h.w	4000	5	2	2	1	1	2	1	1	1	1	1	2	3	2	3	1	2	2	1	3	1	1	0
239	4	8	1	3	3	5	4	coolie	h.w	4000	5	2	2	1	1	2	1	1	1	1	1	2	2	2	3	2	2	2	1	3	1	1	15
240	4	8	1	3	1	3	2	coolie	h.w	4000	5	2	1	1	1	2	1	3	1	2	1	2	2	2	3	2	2	2	1	3	1	1	15
241	4	8	1	3	1	5	4	coolie	h.w	3000	5	2	1	1	1	2	1	3	1	2	1	2	2	2	3	2	2	2	1	3	1	1	1
242	4	8	1	3	3	8	7	coolie	h.w	4500	5	2	2	1	1	2	1	3	1	1	1	2	2	2	3	1	1	2	1	3	1	2	0
243	4	8	1	3	1	4	iliterate	coolie	h.w	3000	5	2	1	1	1	2	1	3	1	2	1	2	2	2	3	2	2	2	1	3	1	1	15,1
244	4	7	1	2	1	8	6	autodriver	h.w	6000	4	2	2	1	1	2	1	1	1	1	1	2	2	2	3	1	2	2	1	3	1	2	0
245	4	7	1	2	1	5	4	coolie	h.w	3500	5	2	1	1	1	2	1	1	1	2	1	2	2	2	3	2	2	2	1	3	1	1	1
246	4	7	1	2	1	8	7	autodriver	h.w	6000	4	2	2	1	1	2	1	1	1	1	1	2	2	1	1	1	1	2	2	3	2	1	0
247	4	7	1	2	1	10	8	coolie	coolie	4500	4	2	2	1	1	2	1	1	1	1	1	2	3	2	3	2	2	2	1	3	1	1	0
248	4	7	1	2	3	5	4	coolie	h.w	4000	5	2	1	1	1	2	1	3	1	2	1	2	2	2	3	2	2	2	1	3	1	1	15
249	4	7	1	2	1	10	8	autodriver	h.w	6500	4	2	2	1	1	2	1	1	1	1	1	2	2	2	3	1	1	2	2	3	1	1	0
250	4	7	1	2	1	9		coolie	h.w	4500	5	2	1	1	1	2	1	3	1	1	1	2	2	1	1	1	1	2	1	3	2	2	15
251	4	7	1	2	3	illiterate	iliterate	coolie	h.w	4000	6	2	2	1	1	2	1	3	1	2	1	2	2	2	3	1	2	2	2	3	1	2	15
252	4	7	1	2	1	illiterate	iliterate	coolie	h.w	4000	5	2	1	1	1	2	1	3	1	1	1	2	2	2	1	1	1	2	2	3	1	2	15
253	4	7	1	2	3	5	3	coolie	h.w	3500	5	3	2	1	1	2	1	1	1	2	1	2	2	2	1	1	1	2	1	3	1	2	13
254	4	7	1	2	3	4	2	coolie	h.w	4000	5	3	2	2	1	2	1	3	1	2	1	2	2	2	3	1	1	2	1	3	1	2	13
255	4	7	1	2	1	4	3	coolie	h.w	3500	5	2	1	1	1	2	1	3	1	2	1	2	2	2	3	1	1	2	2	3	1	1	1,7
256	4	7	1	2	1	5	3	coolie	h.w	4000	6	2	1	2	1	2	1	1	1	2	1	2	3	2	3	1	1	2	2	3	1	1	1,15
257	4	7	1	2	1	illiterate	iliterate	coolie	h.w	4000	5	2	1	1	1	2	1	3	1	2	1	2	3	2	3	1	1	2	2	3	1	1	7
258	4	7	1	2	1	9	7	coolie	coolie	5000	4	2	2	1	1	2	1	1	1	1	1	2	3	2	3	1	1	2	2	3	1	2	0
259	4	7	1	2	1	illiterate	iliterate	coolie	h.w	3500	4	2	1	1	1	2	1	3	1	2	1	2	2	2	3	1	2	2	1	3	1	1	15

S.NO	SCH NO	AGE	SEX	STD	RELIGION	F.EDU	M.EDU	F.OCCU	M.OCCU	INCOME	MEMBERS	HOUSE	ROOMS	SAME ROOM	WATER	TOILET	WASTE	BATH	SOAP	WASHED CLOTHES	HAIR BATH	NAILS	SKIN DIS.IN FAMILY	DRESS	HAIR	NOSE	EAR	TEATH	CARIES	NAILS	BODY ODOUR	BAREFOOT	SKIN DISEASE
260	4	6	1	2	1	5	4	coolie	h.w	3500	6	2	2	1	1	2	1	1	1	2	1	2	2	2	3	1	2	2	2	3	1	1	1
261	4	7	1	2	1	6	3	coolie	h.w	4000	5	2	2	1	1	2	1	1	1	2	1	2	2	1	3	1	1	2	2	3	2	2	7
262	4	7	1	2	1	4	2	coolie	h.w	4000	5	2	2	1	1	2	1	3	1	1	1	2	2	2	3	1	1	2	2	3	1	2	15
263	4	7	1	2	1	8	7	coolie	h.w	4000	4	3	2	1	1	2	1	1	1	1	1	2	2	2	1	1	2	2	1	3	1	1	0
264	4	7	1	2	1	4	3	coolie	h.w	3500	5	5	2	1	1	2	1	1	1	2	1	2	2	2	3	1	1	2	2	3	1	2	15
265	4	7	1	2	1	9	8	autodriver	h.w	6000	4	2	2	1	1	2	1	1	1	1	1	2	2	2	3	1	1	2	1	3	1	1	0
266	4	7	1	2	3	6	5	coolie	h.w	3500	5	2	1	1	1	2	1	3	1	2	1	2	2	2	1	1	1	2	2	3	1	1	15
267	4	7	1	2	1	5	4	coolie	h.w	4000	5	2	2	1	1	2	1	3	1	2	1	2	2	1	1	1	1	2	2	3	2	1	15
268	4	6	1	1	1	illiterate	iliterate	coolie	h.w	3500	5	2	2	1	1	2	1	1	1	2	1	2	2	2	1	1	2	2	2	3	1	2	7
269	4	6	1	1	1	illiterate	iliterate	coolie	h.w	3500	5	2	2	1	1	2	1	1	1	2	1	2	2	2	2	1	2	2	2	3	1	2	15
270	4	6	1	1	3	8	5	shop	h.w	5000	5	3	3	2	1	2	1	1	1	1	1	2	3	2	1	1	1	2	2	3	1	2	0
271	4	6	1	1	3	6	5	coolie	h.w	3500	5	3	2	1	1	2	1	3	1	2	1	2	2	2	3	1	2	2	2	3	1	1	7
272	4	5	1	1	1	5	4	coolie	h.w	4000	6	3	2	1	1	2	1	1	1	2	1	2	2	2	3	1	1	2	1	3	1	1	1
273	4	9	1	4	1	6	5	coolie	h.w	3500	5	2	2	1	1	2	1	3	1	2	1	2	2	2	1	1	1	2	2	3	2	1	7
274	4	9	1	4	1	illiterate	iliterate	coolie	h.w	3000	6	2	2	1	1	2	1	1	1	2	1	2	2	1	1	1	1	2	2	3	1	2	1,7
275	4	9	1	4	3	illiterate	iliterate	coolie	h.w	4000	5	2	2	1	1	2	1	1	1	2	1	2	2	1	1	1	1	2	2	3	2	1	15
276	4	9	1	4	3	9	8	autodriver	h.w	6000	5	2	2	1	1	2	1	1	1	1	1	2	2	2	3	1	1	2	1	3	1	1	0
277	4	9	1	4	1	8	7	coolie	h.w	4000	4	2	2	1	1	2	1	1	1	1	1	2	2	1	3	1	1	2	2	3	1	2	0
278	4	9	1	4	3	4	3	coolie	h.w	4000	5	2	2	1	1	2	1	3	1	2	1	2	3	2	3	1	1	2	1	3	1	1	15
279	4	9	1	4	3	4	2	coolie	h.w	3500	4	2	1	1	1	2	1	3	1	2	1	2	3	2	3	1	1	2	1	3	1	2	7
280	4	9	1	4	1	5	3	coolie	h.w	4000	5	2	2	1	1	2	1	3	1	2	1	2	2	2	3	1	1	2	2	3	1	2	7,15
281	4	9	1	4	1	8	7	coolie	h.w	4000	4	2	2	1	1	2	1	1	1	1	1	2	2	2	1	1	1	2	1	3	1	2	7
282	4	9	1	4	1	5	4	coolie	h.w	3500	5	2	2	1	1	2	1	3	1	2	1	2	2	1	1	1	1	2	1	3	1	2	0
283	4	9	2	4	1	6	5	coolie	h.w	4000	4	2	2	1	1	2	1	1	1	2	1	2	2	2	3	1	1	2	1	3	1	1	1
284	4	9	2	4	1	8	7	coolie	h.w	4000	4	3	2	1	1	2	1	1	1	1	1	2	2	2	1	1	1	2	1	3	1	2	0
285	4	9	2	4	3	4	iliterate	coolie	h.w	4000	5	2	2	2	1	2	1	3	1	1	1	2	2	2	1	1	1	2	1	3	1	2	10
286	4	9	2	4	1	5	4	coolie	h.w	4000	5	2	2	1	1	2	1	1	1	1	1	2	2	2	3	1	1	2	1	3	1	1	15
287	4	9	2	4	1	6	3	coolie	h.w	4000	5	2	2	1	1	2	1	1	1	2	1	2	2	2	3	1	1	2	1	3	1	2	14
288	1	6	2	1	1	6	4	coolie	h.w	3500	4	2	1	1	1	2	1	1	1	2	1	2	2	2	2	1	1	2	1	3	2	2	14
289	1	6	2	1	1	8	7	coolie	h.w	3500	5	2	2	1	1	2	1	1	1	1	1	2	2	2	2	1	1	2	1	3	2	2	0
290	1	6	2	1	2	9	8	coolie	h.w	4000	4	2	2	1	1	2	1	1	1	1	1	2	2	2	2	1	1	2	1	3	2	2	0
291	4	7	1	2	3	7	7	coolie	h.w	4000	4	2	2	1	1	2	1	1	1	1	1	2	2	2	1	1	1	2	2	1	2	1	0
292	4	7	1	2	3	6	4	coolie	h.w	4000	4	2	2	1	1	2	1	1	1	1	1	2	2	1	1	1	2	1	2	3	2	2	6
293	4	7	1	2	3	6	4	coolie	h.w	3500	5	2	2	1	1	2	1	1	1	1	1	2	2	2	3	1	2	2	1	3	2	2	0
294	4	10	1	5	1	5	iliterate	coolie	h.w	4000	5	2	2	1	1	2	1	1	1	1	1	2	2	2	3	1	1	2	1	3	1	2	1
295	4	10	1	5	1	5	2	coolie	h.w	4000	4	3	2	1	1	2	1	3	1	2	1	2	2	2	1	1	1	2	2	3	1	2	0
296	4	10	1	5	3	3	iliterate	coolie	h.w	3500	4	2	2	1	1	2	1	1	1	2	1	2	2	2	3	1	1	2	1	3	1	2	7
297	4	10	1	5	1	7	6	coolie	h.w	4000	4	2	2	1	1	2	1	1	1	1	1	2	2	2	1	1	1	2	2	3	1	1	0
298	4	10	1	5	1	6	5	coolie	h.w	3500	5	2	2	1	1	2	1	1	1	2	1	2	3	1	1	1	1	2	1	3	2	1	15
299	4	10	1	5	3	4	3	coolie	h.w	4000	5	3	2	1	1	2	1	1	1	2	1	2	2	2	2	1	1	2	1	3	1	2	7
300	4	10	1	5	1	5	3	coolie	h.w	4000	4	2	2	1	1	2	1	1	1	1	1	2	2	2	1	1	2	2	1	3	1	2	7
301	4	10	1	5	3	6	3	coolie	h.w	4000	5	2	2	2	1	2	1	1	1	1	1	2	3	2	1	1	1	2	1	3	1	2	15
302	4	10	1	5	1	5	iliterate	coolie	h.w	4000	4	2	2	1	1	2	1	1	1	1	1	2	2	2	1	1	1	2	2	3	1	2	15
303	4	10	1	5	1	6	5	coolie	h.w	4000	4	2	2	1	1	2	1	1	1	1	1	2	2	2	3	1	1	2	1	3	1	1	0
304	4	10	1	5	3	7	6	coolie	h.w	4000	4	2	2	1	1	2	1	1	1	1	1	2	2	2	1	1	1	2	1	3	1	2	0
305	4	10	1	5	1	6	5	coolie	h.w	4000	4	2	2	1	1	2	1	1	1	1	1	2	2	2	3	1	2	2	2	3	1	2	15
306	4	10	1	5	1	9	8	autodriver	h.w	6000	4	2	3	2	1	2	1	1	1	1	1	2	2	1	1	1	1	2	2	3	2	2	0
307	4	10	1	5	1	8	6	coolie	h.w	4000	4	2	2	1	1	2	1	1	1	1	1	2	2	2	1	1	2	2	1	3	1	2	1
308	4	10	1	5	3	7	5	coolie	h.w	4000	5	2	2	1	1	2	1	3	1	1	1	2	2	1	1	1	1	2	1	3	1	1	1,7
309	4	9	1	4	1	6	4	coolie	h.w	4000	4	2	2	1	1	2	1	1	1	1	1	2	2	2	3	2	2	2	1	3	1	2	1,15
310	4	9	1	4	1	7	6	coolie	coolie	6000	4	3	3	2	1	1	1	1	1	1	1	2	2	2	3	1	1	2	1	3	1	2	0
311	4	9	1	4	3	6	3	coolie	h.w	4000	4	3	2	1	1	2	1	1	1	2	1	2	2	2	1	2	2	2	2	3	1	1	15
312	4	9	1	4	1	5	iliterate	coolie	h.w	3500	5	2	2	1	1	2	1	3	1	2	1	2	2	2	3	2	2	2	1	3	1	1	1,15
313	4	9	1	4	1	4	iliterate	coolie	h.w	4000	4	3	2	1	1	2	1	1	1	2	1	2	2	2	3	2	2	2	1	3	1	2	15
314	4	9	1	4	3	3	iliterate	coolie	coolie	5000	6	3	2	1	1	2	1	1	1	1	1	2	2	2	1	1	1	2	2	3	1	2	15
315	4	9	1	4	1	8	6	autodriver	coolie	4000	4	2	2	1	1	2	1	1	1	1	1	2	1	2	3	2	2	2	1	3	1	2	0
316	4	9	1	4	3	7	6	coolie	coolie	4000	4	2	2	1	1	2	1	1	1	1	1	2	1	1	3	1	1	2	1	3	2	2	0
317	4	10	1	5	1	5	4	coolie	coolie	4000	4	2	2	1	1	2	1	1	1	1	1	2	3	2	1	1	1	2	2	3	1	2	7,15
318	4	9	1	4	3	3	iliterate	coolie	coolie	3500	4	2	1	1	1	2	1	1	1	2	1	2	3	2	1	1	1	2	2	3	1	2	15
319	4	9	1	4	1	4	3	coolie	coolie	4000	5	2	1	1	1	2	1	1	1	2	1	2	3	2	3	1	1	2	2	3	1	2	15
320	4	10	1	5	3	2	iliterate	coolie	coolie	4000	5	2	2	1	1	2	1	1	1	2	1	2	3	2	1	1	1	2	2	3	2	2	7,15
321	4	9	1	4	1	3	iliterate	coolie	coolie	4000	5	2	2	1	1	2	1	3	1	2	1	2	2	2	3	1	2	2	1	3	1	2	1
322	4	9	1	4	1	2	iliterate	coolie	coolie	3500	4	2	2	1	1	2	1	1	1	2	1	2	2	2	3	1	1	2	1	3	1	2	1
323	4	10	2	5	3	8	7	autodriver	h.w	6000	4	2	2	1	1	2	7	1	1	1	1	2	2	1	2	1	1	2	2	3	2	1	14
324	4	9	1	4	1	4	iliterate	coolie	h.w	3500	4	3	2	1	1	2	1	3	1	1	1	2	2	1	3	1	1	2	1	3	1	2	15
325	4	9	1	4	3	6	4	coolie	h.w	4000	4	2	2	1	1	2	1	1	1	2	1	2	2	2	3	1	1	2	1	3	1	1	7

S.NO	SCH NO	AGE	SEX	STD	RELIGION	F.EDU	M.EDU	F.OCCU	M.OCCU	INCOME	MEMBERS	HOUSE	ROOMS	SAME ROOM	WATER	TOILET	WASTE	BATH	SOAP	WASHED CLOTHES	HAIR BATH	NAILS	SKIN DIS.IN FAMILY	DRESS	HAIR	NOSE	EAR	TEATH	CARIES	NAILS	BODY ODOUR	BAREFOOT	SKIN DISEASE
326	4	10	2	5	1	5	4	coolie	h.w	3500	4	2	2	1	1	2	1	1	1	1	1	2	2	2	1	2	2	2	2	3	1	1	15
327	4	9	2	4	1	7	6	coolie	h.w	4000	4	2	2	1	1	2	1	1	1	1	1	2	2	2	2	1	2	2	2	2	2	1	14
328	4	9	2	4	1	5	4	coolie	h.w	4000	4	3	2	1	1	2	1	2	1	1	1	2	1	1	2	2	2	2	1	3	2	1	6
329	4	9	2	4	1	6	3	coolie	h.w	3500	4	2	2	1	1	2	1	1	1	1	1	2	2	2	2	1	2	2	1	3	2	1	14
330	4	9	2	4	3	5	4	coolie	h.w	4000	4	2	2	1	1	2	1	3	1	1	1	2	2	2	2	1	2	2	1	3	2	2	1,14
331	4	9	2	4	3	6	2	coolie	h.w	4000	4	2	2	1	1	2	1	1	1	1	1	2	2	2	2	2	2	2	1	3	2	1	13
332	4	8	2	4	1	8	5	coolie	coolie	5000	4	3	2	1	1	2	1	1	1	1	1	2	2	1	1	1	2	1	2	3	2	2	0
333	4	8	2	4	3	4	2	coolie	h.w	4000	5	2	2	1	1	2	1	1	1	1	1	2	3	2	2	2	2	2	1	3	2	2	6
334	4	9	2	4	1	9	7	autodriver	h.w	4000	4	2	2	1	1	2	1	1	1	1	1	2	3	2	2	1	2	2	1	2	2	2	0
335	4	9	2	4	1	4	iliterate	coolie	h.w	3500	4	2	2	1	1	2	1	1	1	1	1	2	3	2	2	2	2	2	1	3	2	2	7
336	4	9	2	4	1	5	3	coolie	h.w	4000	4	2	2	1	1	2	1	1	1	1	1	2	2	2	2	1	2	1	2	3	2	1	15
337	4	8	1	4	1	6	4	coolie	h.w	4000	4	2	2	1	1	2	1	1	1	1	1	2	2	2	2	2	1	2	1	3	2	1	15
338	4	10	1	4	1	8	7	coolie	coolie	5000	4	2	2	1	1	2	1	1	1	2	1	2	2	1	1	1	2	1	1	3	2	2	0
339	4	8	1	4	1	6	5	coolie	h.w	5000	4	2	2	1	1	2	1	1	1	2	1	2	2	2	1	2	2	1	1	3	2	1	0
340	4	9	2	4	2	5	4	coolie	h.w	4000	5	2	2	1	1	2	1	3	1	1	1	2	2	1	1	1	1	2	1	3	2	2	15
341	4	8	2	4	1	6	3	coolie	h.w	4000	4	2	2	1	1	2	1	3	1	2	1	2	2	1	2	1	2	2	1	3	2	2	7
342	4	8	2	4	1	5	2	coolie	h.w	4000	5	2	2	1	1	2	1	1	1	2	1	2	2	2	2	1	2	2	1	3	2	1	0
343	4	9	2	4	1	illiterate	iliterate	coolie	h.w	4500	4	2	2	1	1	2	1	1	1	1	1	2	2	1	2	2	2	2	1	3	2	1	14
344	4	9	2	4	3	illiterate	iliterate	coolie	h.w	4000	4	2	2	1	1	2	1	3	1	2	1	2	2	2	2	2	2	2	1	3	2	2	14
345	4	9	2	4	2	8	6	coolie	h.w	4000	5	2	2	1	1	2	1	1	1	1	1	2	2	1	2	1	2	2	1	3	2	2	0
346	4	8	1	4	3	6	4	coolie	coolie	5000	5	2	2	1	1	2	1	1	1	1	1	2	2	2	2	1	2	2	1	3	2	2	7
347	4	9	2	4	1	10	9	driver	h.w	6000	4	2	3	2	1	2	1	1	1	1	1	2	2	1	2	1	2	2	2	3	2	2	0
348	4	8	2	4	3	5	2	coolie	h.w	3500	4	2	2	1	1	2	1	3	1	2	1	2	2	1	2	1	2	2	1	3	2	2	1
349	4	9	2	4	3	4	iliterate	coolie	h.w	3500	4	2	2	1	1	2	1	1	1	2	1	2	2	2	2	1	2	2	1	3	2	2	14
350	4	8	1	4	1	8	6	coolie	h.w	4000	4	2	2	1	1	2	1	1	1	1	1	2	2	1	2	1	2	2	2	1	1	1	0
351	4	10	2	5	3	6	5	coolie	h.w	4000	4	2	2	1	1	2	1	1	1	1	1	2	2	2	2	1	2	2	2	3	1	2	0
352	4	10	2	5	1	6	4	coolie	h.w	4000	4	2	2	1	1	2	1	1	1	2	1	2	2	1	2	2	2	2	2	3	2	2	15
353	4	10	2	5	3	3	iliterate	coolie	h.w	3500	4	3	2	1	1	2	1	1	1	2	1	2	2	2	2	2	2	2	1	3	1	2	14
354	4	10	2	5	1	7	6	coolie	coolie	5000	5	2	2	1	1	2	1	1	1	1	1	2	2	1	1	1	2	2	2	3	1	1	0
355	4	10	2	5	3	6	5	coolie	h.w	4500	4	2	2	1	1	2	1	3	1	2	1	2	2	2	2	1	2	2	1	3	1	1	1
356	4	10	2	5	1	8	7	coolie	coolie	5000	4	2	3	2	1	2	1	1	1	1	1	2	2	1	2	2	2	1	2	2	1	1	0
357	4	10	2	5	1	6	3	coolie	h.w	4000	4	2	2	1	1	2	1	1	1	2	1	2	3	2	2	1	2	2	1	3	1	2	7
358	4	10	2	5	1	8	7	coolie	h.w	4000	4	2	2	1	1	2	1	1	1	1	1	2	3	1	2	1	1	2	2	3	2	2	0
359	4	10	2	5	3	9	7	coolie	h.w	4000	4	2	2	1	1	2	1	1	1	1	1	2	2	1	1	2	1	2	1	3	2	1	0
360	4	10	1	5	1	6	4	coolie	h.w	3500	4	2	2	1	1	2	1	1	1	2	1	2	2	2	1	2	2	2	1	3	1	2	7
361	4	10	1	5	1	5	3	coolie	h.w	4000	5	2	2	1	1	2	1	1	1	2	1	2	2	2	1	1	2	2	1	3	2	2	0
362	4	10	2	5	2	4	iliterate	coolie	h.w	4000	5	2	2	1	1	2	1	1	1	2	1	2	2	1	2	2	2	2	2	3	1	2	1
363	4	10	2	5	3	5	3	coolie	h.w	4000	4	2	2	1	1	2	1	3	1	2	1	2	2	2	1	2	2	2	3	2	2	2	14
364	4	10	2	5	3	4	3	coolie	h.w	4000	4	2	2	1	1	2	1	3	1	2	1	2	2	2	2	1	2	2	2	3	2	2	14
365	4	10	2	5	1	9	7	autodriver	h.w	6000	5	2	2	1	1	2	1	1	1	1	1	2	2	2	3	1	2	2	2	3	1	2	0
366	4	10	2	5	1	6	3	coolie	h.w	4000	4	2	2	1	1	2	1	1	1	2	1	2	2	2	2	1	2	2	1	3	1	2	13
367	4	10	2	5	3	8	6	coolie	coolie	6000	5	2	2	1	1	2	1	1	1	1	1	2	2	1	2	1	2	2	2	3	1	2	0
368	4	10	2	5	3	8	7	coolie	h.w	4000	4	2	2	1	1	2	1	1	1	1	1	2	2	1	2	2	2	2	1	3	2	2	0
369	4	10	2	5	1	2	iliterate	coolie	h.w	4000	4	2	2	1	1	2	1	3	1	2	1	2	2	2	2	2	2	2	1	3	1	2	7
370	4	10	2	5	1	5	3	coolie	h.w	3500	4	2	2	1	1	2	1	1	1	1	1	2	2	2	2	2	2	2	1	3	1	2	14
371	4	10	2	5	1	8	6	coolie	h.w	4000	4	2	2	1	1	2	1	1	1	1	1	2	2	1	2	1	1	2	1	3	2	2	0
372	4	10	2	5	1	7	6	coolie	h.w	4500	4	2	2	1	1	2	1	1	1	1	1	2	2	1	2	1	2	2	1	3	2	2	0
373	4	10	2	5	1	7	5	coolie	h.w	4000	4	3	2	1	1	2	1	1	1	1	1	2	2	2	2	1	2	2	1	3	2	2	0
374	4	10	2	5	1	7	6	coolie	h.w	4000	4	3	2	1	1	2	1	1	1	1	1	2	2	1	2	1	2	1	2	3	2	2	0
375	4	10	2	5	1	3	iliterate	coolie	h.w	4000	5	3	1	1	1	2	1	3	1	2	1	2	2	2	2	1	1	1	2	1	2	2	6
376	4	10	2	5	3	8	6	coolie	h.w	4000	4	2	2	1	1	2	1	1	1	1	1	2	2	1	1	1	2	1	2	2	2	2	0
377	4	10	2	5	3	8	6	coolie	h.w	4500	4	2	2	1	1	2	1	1	1	1	1	2	2	1	2	1	2	1	1	3	2	2	0
378	3	9	2	4	3	4	2	coolie	h.w	4000	4	2	2	1	1	2	1	3	1	2	1	2	3	1	1	1	2	2	1	3	2	2	0
379	3	9	2	4	2	6	5	tailor	h.w	4000	4	3	2	1	1	2	1	3	1	2	1	2	3	1	2	1	2	2	2	3	1	2	1
380	1	8	2	3	2	8	7	coolie	h.w	4000	4	3	2	1	1	2	1	1	1	1	1	2	2	2	1	1	1	1	1	1	2	2	0
381	4	9	1	4	3	5	3	coolie	h.w	4000	5	3	2	1	1	2	1	3	1	1	1	2	2	2	3	1	1	2	1	3	1	2	7,15
382	4	9	1	4	1	4	iliterate	coolie	h.w	4000	5	3	2	1	1	2	1	3	1	2	1	2	2	2	3	1	1	2	2	3	1	2	7,15
383	3	6	1	1	1	12	10	watchman	h.w	5000	4	2	3	2	1	1	1	1	1	1	1	2	3	1	1	1	2	2	2	1	2	2	0
384	3	8	2	3	1	6	4	coolie	h.w	4000	4	2	2	1	1	1	1	1	1	1	1	2	2	1	1	1	2	2	2	3	2	2	15
385	3	7	1	2	1	10	8	autodriver	h.w	6000	4	2	2	1	2	1	1	1	1	1	1	2	2	1	1	1	2	2	2	3	2	2	0
386	3	8	2	3	1	6	5	coolie	h.w	4500	3	2	2	1	2	1	1	1	1	1	1	2	3	1	2	1	2	2	1	3	2	2	1
387	3	9	1	4	1	10	6	autodriver	h.w	6000	4	2	2	1	2	1	1	1	1	1	1	2	3	1	1	1	1	2	1	3	2	2	0
388	3	9	2	4	1	8	5	coolie	h.w	4500	4	2	3	2	2	1	1	1	1	2	1	2	2	2	2	1	1	2	1	3	2	2	14
389	3	10	1	5	1	5	4	coolie	h.w	4000	4	2	3	2	1	1	1	1	1	2	1	2	2	2	1	1	1	2	1	3	2	2	15
390	3	10	2	5	1	4	4	coolie	h.w	4000	4	2	2	1	2	1	1	1	1	2	1	2	2	2	2	1	1	2	2	1	2	2	14
391	1	8	1	3	3	3	iliterate	coolie	h.w	4000	5	2	2	1	2	2	1	1	1	1	1	2	2	2	1	2	2	1	2	1	2	2	6

S.NO	SCH NO	AGE	SEX	STD	RELIGION	F.EDU	M.EDU	F.OCCU	M.OCCU	INCOME	MEMBERS	HOUSE	ROOMS	SAME ROOM	WATER	TOILET	WASTE	BATH	SOAP	WASHED CLOTHES	HAIR BATH	NAILS	SKIN DIS.IN FAMILY	DRESS	HAIR	NOSE	EAR	TEATH	CARIES	NAILS	BODY ODOUR	BAREFOOT	SKIN DISEASE
392	1	7	2	2	1	6	5	coolie	h.w	4000	4	2	2	1	2	2	1	1	1	1	1	2	2	2	2	2	2	2	1	3	2	2	0
393	1	5	1	1	2	2	iliterate	coolie	h.w	4000	4	2	2	1	2	1	1	1	1	1	1	2	2	2	2	2	2	2	1	3	2	2	14
394	1	10	1	5	1	3	iliterate	coolie	h.w	3500	4	2	2	2	2	2	1	3	1	2	1	2	3	2	1	1	2	2	1	3	2	2	12
395	1	9	1	4	1	8	6	autodriver	h.w	6000	4	2	2	1	2	1	1	1	1	1	1	2	3	2	1	1	2	2	1	3	2	2	0
396	1	8	1	3	1	7	6	coolie	coolie	5000	4	2	2	1	2	1	1	1	1	1	1	2	3	2	1	1	2	2	1	3	2	2	0
397	1	8	2	3	3	5	3	coolie	h.w	4000	4	2	2	1	2	2	1	1	1	1	1	2	3	2	2	1	2	1	1	3	2	2	14
398	1	6	2	1	3	4	3	coolie	h.w	4000	4	2	2	1	1	2	1	1	1	1	1	2	2	2	2	1	1	2	1	1	2	2	14
399	1	6	1	1	1	6	5	coolie	h.w	4000	4	2	2	1	1	2	1	1	1	1	1	2	2	2	1	1	2	1	1	1	2	1	0
400	1	8	1	3	3	6	3	coolie	h.w	3500	4	2	2	1	2	2	1	3	1	1	1	2	2	2	1	1	1	1	1	1	2	1	1
401	3	8	2	3	3	8	7	coolie	h.w	4000	4	2	2	1	1	1	1	1	1	1	1	2	2	1	3	2	2	2	1	3	2	2	0
402	3	8	2	3	1	4	iliterate	coolie	coolie	4500	4	2	2	1	2	2	1	1	1	1	1	2	2	2	1	1	2	2	1	3	2	2	13
403	3	10	1	5	1	5	2	coolie	h.w	4000	4	2	2	1	2	1	1	1	1	1	1	2	2	1	3	1	2	2	1	3	2	2	0
404	3	9	2	4	3	3	iliterate	coolie	h.w	3500	4	2	1	1	2	2	1	3	1	2	1	2	2	2	1	1	2	2	1	3	2	2	6
405	3	8	1	3	3	7	6	coolie	h.w	4000	4	2	2	1	2	2	1	1	1	2	1	2	3	1	1	1	2	1	1	3	2	2	0
406	3	10	1	5	3	8	5	coolie	h.w	4000	5	2	3	1	2	2	1	1	1	2	1	2	2	2	1	1	2	2	2	3	2	2	0
407	3	9	1	4	1	7	5	coolie	h.w	4500	4	2	2	1	2	2	1	1	1	2	1	2	2	2	1	1	2	2	1	3	2	2	0
408	3	8	1	3	3	6	4	coolie	h.w	4000	4	2	2	1	2	2	1	1	1	2	1	2	3	2	1	2	2	2	2	3	2	2	0
409	3	9	1	4	2	7	5	coolie	h.w	4000	4	2	2	1	1	2	1	1	1	2	1	2	3	1	3	1	1	1	1	3	2	2	0
410	3	9	1	4	3	8	7	shop	h.w	4000	4	2	2	1	1	1	1	1	1	1	1	2	2	2	3	2	1	1	1	3	2	1	0
411	3	10	1	5	1	6	5	coolie	h.w	4000	4	2	2	1	1	2	1	1	1	1	1	2	2	2	3	1	2	2	1	3	2	2	15
412	3	9	1	4	2	7	5	coolie	h.w	4000	4	2	2	1	1	2	1	1	1	1	1	2	2	2	1	1	2	2	1	3	2	2	0
413	3	7	1	2	2	5	4	coolie	h.w	3500	4	2	2	1	2	2	1	1	1	1	1	2	2	2	1	1	2	2	1	3	2	2	0
414	3	8	1	3	2	4	3	coolie	h.w	4000	4	2	1	1	2	2	1	1	1	1	1	2	2	2	1	1	2	2	1	3	2	2	0
415	3	8	2	3	1	illiterate	iliterate	coolie	h.w	4000	4	2	2	1	2	2	1	1	1	1	1	2	3	2	2	1	2	2	1	3	2	2	14
416	3	9	2	4	1	3	2	coolie	h.w	4000	4	2	2	1	2	2	1	1	1	1	1	2	2	2	2	1	2	2	1	3	2	2	1
417	3	10	2	5	3	5	4	coolie	h.w	4000	4	2	2	1	2	2	1	1	1	1	1	2	2	2	2	1	2	2	1	3	2	2	0
418	3	6	2	1	3	6	4	coolie	h.w	4000	4	2	2	1	2	1	1	1	1	1	1	2	3	2	2	1	2	1	2	3	2	2	13
419	3	6	2	1	2	6	4	coolie	h.w	4000	4	2	2	1	2	2	1	1	1	1	1	2	3	2	1	1	2	1	2	3	2	2	7
420	3	8	2	3	1	5	3	coolie	h.w	4000	4	2	2	1	2	2	1	1	1	1	1	2	2	2	1	1	2	1	2	3	2	2	6
421	3	7	1	2	1	4	2	coolie	coolie	5000	5	2	2	1	2	2	1	1	1	1	1	2	2	2	1	1	2	1	2	3	2	2	0
422	1	9	2	4	1	3	iliterate	coolie	h.w	4000	4	2	2	1	1	1	1	1	1	1	1	2	2	2	1	1	1	1	2	2	3	2	7
423	1	6	2	1	1	4	3	coolie	h.w	4000	4	2	2	1	2	1	1	1	1	1	1	2	2	2	1	1	1	2	1	3	2	2	0
424	1	10	1	5	3	5	4	coolie	h.w	4000	3	2	2	1	2	1	1	1	1	2	1	2	2	2	1	1	1	2	2	2	2	2	1
425	1	9	1	4	3	6	4	coolie	h.w	4500	3	2	2	1	2	1	1	1	1	2	1	2	2	2	1	2	2	2	1	3	2	1	15

INSTITUTIONAL ETHICS COMMITTEE
MADRAS MEDICAL COLLEGE, CHENNAI -3

Telephone No: 044 25305301
Fax: 044 25363970

CERTIFICATE OF APPROVAL

The Institutional Ethics committee of Madras Medical College, reviewed and discussed your application for approval of the proposal entitled "A cross sectional study on the prevalence of common skin diseases among primary school children in government schools of pulianthope zone, Chennai 2011" No. 14082011.

The following members of Ethics Committee were present in the meeting held on 16.08.2011 conducted at Madras Medical College, Chennai -3.

1. Prof. S.K. Rajan. MD	-- Chairperson
2. Dr. V. Kanagasabai MD Dean, Madras Medical College, Chennai -3	-- Deputy Chairman
3. Pro. A. Sundaram MD Vice Principal, Madras Medical College, Ch -3	-- Member Secretary
4. Prof. R. Sathianathan MD	-- Member
5. Prof. R. Nandhini MD Director, Institute of Pharmacology ,MMC, Ch-3	-- Member
6. Prof. C. Rajendiran, MD Director , Inst. Of Internal Medicine, MMC, Ch-3	-- Member
7. . Thiru. A. Ulaganathan Administrative Officer, MMC, Ch-3	--- Layperson
8 . Thiru. S. Govindsamy. BA BL	-- Lawyer
9. Tmt. Arnold soulina MA	-- Social Scientist

We approve the proposal to be conducted in its presented form.

Sd/ chairman & Other Members

The Institutional Ethics Committee expects to be informed about the progress of the study, and SAE occurring in the course of the study, any changes in the protocol and patients information / informed consent and asks to be provided a copy of the final report.

Member Secretary, Ethics Committee

"A CROSS - SECTIONAL STUDY ON THE PREVALENCE OF COMMON SKIN DISEASES AMONG PRIMARY SCHOOL CHILDREN IN GOVERNMENT SCHOOLS OF PULIANTHOPE ZONE, CHENNAI 2011"

ABSTRACT

Introduction: Skin diseases are common among school going children. The prevalence of skin diseases among children in various parts of India range from 8.7% to 35% in school based surveys. Early diagnosis and prompt treatment of skin diseases can decrease the childhood morbidity and their complications. **Objectives**: To find the prevalence of common skin diseases among the primary school children in Government Schools and the factors associated with the skin diseases in the above population. **Methodology**: A cross sectional study was done among Primary School children in 4 Government schools in Pulianthope Zone of Chennai. The schools were chosen by Two Stage Random sampling method and the period was between March to November 2011. Skin examination was done in the Schools in sunlight and the data was collected from the parents or available family members by home visits. The association between various factors and skin diseases were analyzed by using Chi Square and Fisher's Exact test. **Results**: The study revealed the overall prevalence of skin diseases to be 59.3% (95% C.I 54.2% to 63.7%). Pediculosis Capitis was the common disease followed by Miliaria, Impetigo, and Scabies. There was significant association between parent's educational status, Socio economic status, more than 4 family members in a house, overcrowding, all family members sharing the same room for sleeping, toilet facility in the house, Children not taking bath daily, not wearing washed clothes daily and the skin diseases. Regarding personal hygiene, unclean school dress, dandruff in the hair, unclean teeth, dental caries, unclean nails, bad body odour and barefoot walking had statistical significant association with the skin diseases. **Conclusion:** Skin diseases constitute a high prevalence in this population in spite of the routine school health programme. Hence adequate attention

should be given to skin diseases. The importance of maintenance of personal hygiene should be taught to each child by the teachers as well as their parents.